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Intermec

User's Guide

EasyCoder PF4i Compact Industrial Printer

(Fingerprint Version)

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Intermec EasyCoder PF4i Compact Industrial—User’s Guide (Fingerprint)

FCC Notice (United States of America)

WARNING

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

DOC Notice (Canada)

Canadian Dept. of Communication

REGULATIONS COMPLIANCE (DOC-A)

This digital apparatus does not exceed the class A limits for radio noise emissions from a digital apparatus as set out in the radio interference regulations of the Canadian Department of Communication.

Ministère des Communications du Canada

CONFORMITE DE REGLEMENTS (DOC-A)

Le présent appareil numérique n'émet pas de bruits radio-électriques dépassant les limites applicables aux appareils numériques de classe A prescrites dans le règlement sur brouillage radioélectrique édicté par le Ministère des Communications du Canada.

GS Notice (Germany)

ALLGEMEINE VORSCHRIFT

Reparaturen oder sonstige Eingriffe, die sich nicht auf normale Bedienung der Maschine beziehen, dürfen ausschließlich nur von einem ausgebildeten, zuständigen Fachmann vorgenommen werden.

EU Standard EN 55022 (The European Union)

WARNING

This is a Class A ITE product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Declaration of Conformity (CE)

We,

Intermec Printer AB
Box 123
S-431 22 Mölndal
Sweden

declareunderoursoleresponsibility,thattheproduct

EasyCoder PF4i Compact Industrial

towhichthisdeclarationrelatesisinconformity withthefollowingstandards

EMC:
EN 61000-6-4:2001
EN 61000-6-2:2001

Electrical Safety:
EN 60 950

followingtheprovisionsofDirectives

89/336/EEC and 73/23/EEC

Mölndal2003-03-12

.....
.....
Per-0veJacobsson

1

printerishandled,modified,orinstalledinothermannersthanthose describedinIntermec's manuals.

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Before You Begin

This section provides you with safety information, technical support information, and sources for additional product information.

Safety Summary

Your safety is extremely important. Read and follow all warnings and cautions in this document before handling and operating Intermec equipment. You can be seriously injured, and equipment and data can be damaged if you do not follow the safety warnings and cautions.

Do not repair or adjust alone

Do not repair or adjust energized equipment alone under any circumstances. Someone capable of providing first aid must always be present for your safety.

First aid

Always obtain first aid or medical attention immediately after an injury. Never neglect an injury, no matter how slight it seems.

Resuscitation

Begin resuscitation immediately if someone is injured and stops breathing. Any delay could result in death. To work on or near high voltage, you should be familiar with approved industrial first aid methods.

Energized equipment

Never work on energized equipment unless authorized by a responsible authority. Energized electrical equipment is dangerous. Electrical shock from energized equipment can cause death. If you must perform authorized emergency work on energized equipment, be sure that you comply strictly with approved safety regulations.

Safety Icons

This section explains how to identify and understand dangers, warnings, cautions, and notes that are in this document. You may also see icons that tell you when to follow ESD procedures.

A warning alerts you of an operating procedure, practice, condition, or statement that must be strictly observed to avoid death or serious injury to the persons working on the equipment.

A caution alerts you to an operating procedure, practice, condition, or statement that must be strictly observed to prevent equipment damage or destruction, or corruption or loss of data.

This icon appears at the beginning of any procedure in this manual that could cause you to touch components (such as printed circuit boards) that are susceptible to damage from electrostatic discharge (ESD). When you see this icon, you must follow standard ESD guidelines to avoid damaging the equipment you are servicing.

Note: Notes either provide extra information about a topic or contain special instructions for handling a particular condition or set of circumstances.

Global Services and Support

Warranty Information

To understand the warranty for your Intermec product, visit the Intermec website at http://www.intermec.com and click Service & Support. The Intermec Global Sales & Service page appears. From the Service & Support menu, move your pointer over Support, and then click Warranty.

Web Support

Visit the Intermec website at http://www.intermec.com to download our current documents in PDF format. To order printed versions of the Intermec manuals, contact your local Intermec representative or distributor.

Visit the Intermec technical knowledge base (Knowledge Central) at http://intermec.custhelp.com to review technical information or to request technical support for your Intermec product.

Telephone Support

Contact your local Intermec representative. To search for your local representative, from the Intermec website, click **Contact**.

Related Documents

The Intermec website at http://www.intermec.com contains our current documents that you can download in PDF format. To order printed versions of the Intermec manuals, contact your local Intermec representative or distributor.

1 Introduction

ThischapterintroducestheEasyCoderPF4iCompact Industrialprinter.Thechaptercoversthefollowing topics:

- DescriptionofEasyCoderPF4iCompactIndustrial
- Safetysummary
- Productidentification

Description of EasyCoder PF4i Compact Industrial

The EasyCoder PF4i Compact Industrial is a sturdy industrial thermal transfer printer with a printhead resolution of 8 dots/mm=203.2 dot/inch (standard) or 11.81 dots/mm=300 dpts/inch (option) and a maximum print width of 104 mm (4.095 inches) or 105.7 mm (4.161 inches) respectively. It offers a large number of useful features, such as:

- Flash memory SIMMs for firmware, fonts, barcodes, and application programs
- Built-in Compact Flash memory card adapter
- Built-in RS-232 and USB interfaces
- Provision for extra interface boards including wired and wireless EasyLAN connections
- Keyboard and display with backlight for improved user interface.

A large number of factory-installed or field-installable options are available, so the printer can be configured for a wider range of applications. See Chapter 9 and Appendix A for more information.

The EasyCoder PF4i Compact Industrial supports the unique and flexible Intermec Fingerprint v8.20 programming language, which allows the user or third-party developer to create custom-made application programs and label formats in a BASIC-like environment.

The printer is also designed to work with the Intermec Direct Protocol programming language, the Intermec InterDriver and Intermec Labelshop. The InterDriver allows you to print labels from standard MS Windows applications, for example Microsoft Office.

The EasyCoder PF4i Compact Industrial supports 15 scaleable Unicode True Type and True Doc fonts as standard. Additional fonts can be downloaded into the printer's Flash memory, or be plugged in using a Compact Flash card. The Unicode standard allows the use of special characters for various languages including non-Latin fonts, such as Arabic, Cyrillic, Chinese, Japanese, Korean, Hebrew, and similar.

A version of EasyCoder PF4i Compact Industrial, that supports the Intermec Programming Language (IPL), is described in a special User's Guide.

Safety Summary

Intermecassumesnoresponsibilityregarding theCEDirectiveifthe printerishandled,modified,orinstalledinanywayotherthanthat describedinIntermec's manuals.

- Readthismanualcarefullybeforeconnectingtheprinter.
- Movingpartsareexposedwhenthedoorsareopen,soensurethatthe doorsareclosedbeforeyouoperatetheprinter.
- Donotopenthefront/left-handcover.Dangerousvoltage!
- Donotremovethebottomplate.Dangerousvoltage!
- Donotputyourfingersinsidetheprintmechanismwhenthepoweris on.
- Placetheprinteronanevensurfacewhichcansupportitsweightof approximately7to8kg(15.5to17.7pounds)plussupplies.
- Donotspraytheprinterwithwater.Ifyouareusingahosetoclean thepremisesinanindustrialenvironment,removetheprinterorprotectitcarefullyfromsprayandmoisture.
- Carefullyreadthewarningtextontheenvelopebeforeusingacleaningcard.

Product Identification

Themachinelabelisattachedtotheprinter's rearplateandcontains informationontype,model,andserialnumberaswellasACvoltage.It alsocontainsvarioussignsofapproval.

2 Installation

Thischapterexplainshowtounpackandinstallthe EasyCoderPF4iCompactIndustrialprinterandalso describestheprinter svariouspartsindetail.Itcovers thefollowingtopics:

- Unpackingtheprinter
- Partsontheprinter’sfront
- Partsontheprinter’srearplate
- Partsinthemediacompartment
- Partsintheprintmechanism
- Connectingtheprinter
- Usingthecontrolsandunderstandingtheindicators

Unpacking the Printer

Beforeyouinstalltheprinter,examinethepackageforpossibledamage ormissingparts:

- Opentheboxandlifttheprinterout.
- Checkthattheprinterhasnotbeenvisiblydamagedduringtranspor- tation.Keepthepackingmaterialsincaseyouneedtomoveorreship theprinter.
- Checkthelabelontheprinter’ srearplate,whichgivesthevoltage,the partnumber,andtheserialnumber.
- Checkthatanyoptionsyouorderedareincluded.
- Checkthatalltheaccessoriesareincluded.Asstandard,theboxcon- tains:
  -IntermecEasyCoderPF4iCompactIndustrialprinter
  -TwosetsofQuick-LoadGuides(wideandnarrow)
  -Powercord
  -Qualitycheckcard
  -Cleaningcard
  -Shortstripoflabels
  -Starterpackofthermaltransferribbon
  -ThisUser’ sGuide
  -SupportingsoftwareandproductinformationonCD.
- Checkthatthetypeofpowercordisappropriateforthelocalstan- dard.Theprinterworkswithin90to265VAC,50to60Hz.

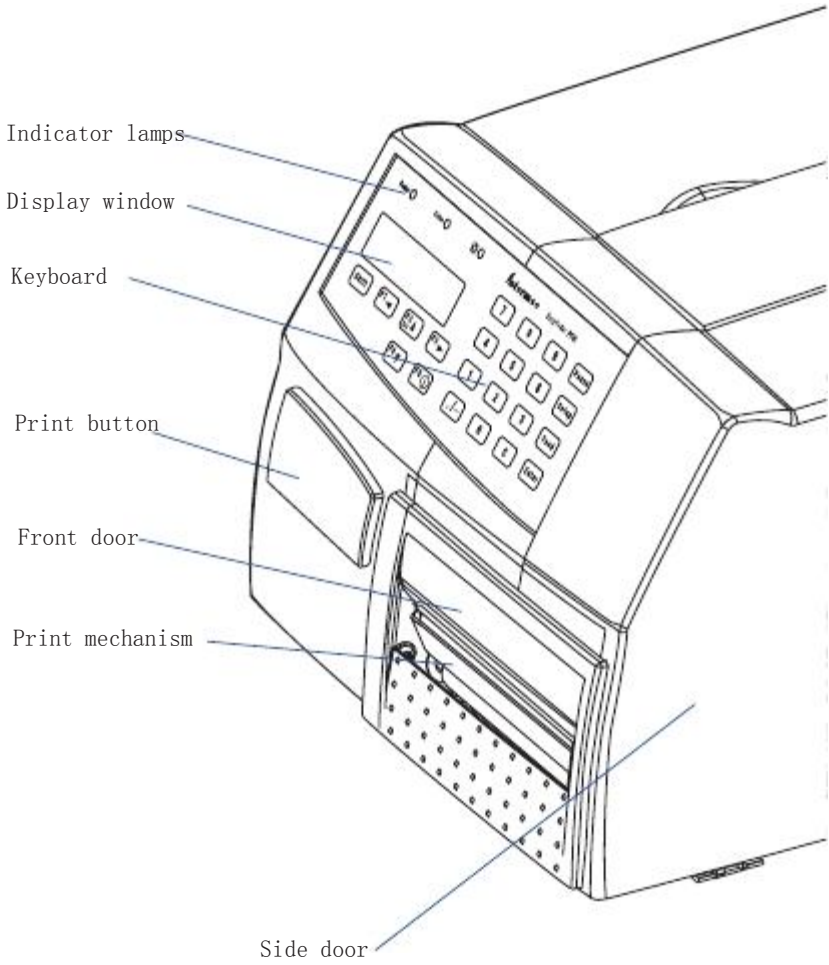
Iftheprinterhasbeendamagedinanywayduringtransportation,com- plaintothecarrierimmediately.

Ifthedeliveryisincorrectoranypartsaremissing,reportitimmediately tothedistributor.

Front View

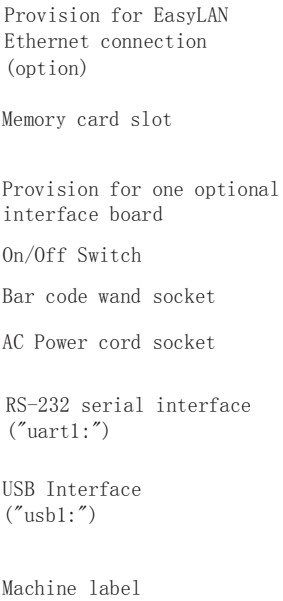
Atthefrontoftheprinterarethedisplaywindow,theindicatorlamps, andthekeyboard.Thesefeaturesallowtheoperatortocontrolandsetup theprintermanually.

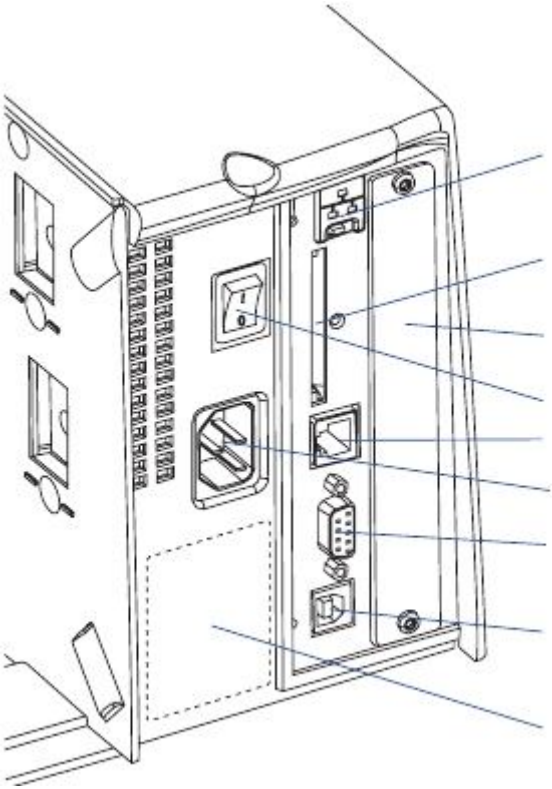
Theprintedlabels,tickets,ortagsarepresentedatthefrontoftheprint mechanism.



Rear View

Therearplatecontainstheon/Offswitch,theACpowercordsocket, andvariousinterfaceconnectorsandslots.



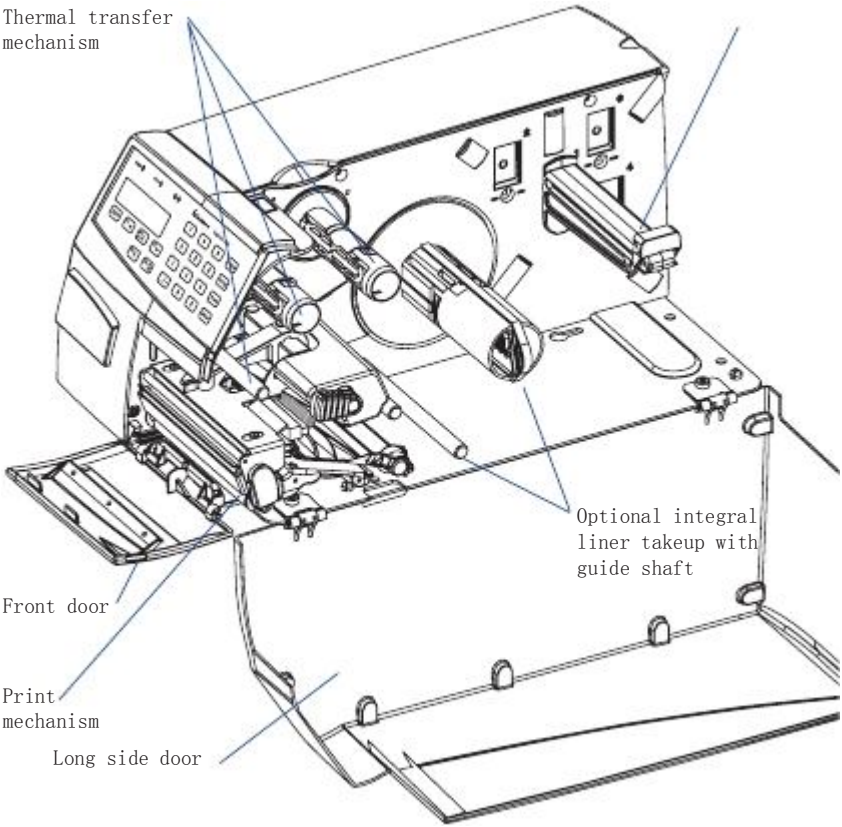


Media Compartment

Description

The media compartment is as standard covered by a long side door that completely encloses the print mechanism and media compartment. (Optionally, the printer can be fitted with a two part "Megatop" that allows a larger media roll to be used.) The door is held by a magnetic lock. It can be opened 180° to provide full access to the media compartment.

The media supply can be from a supply post, or from an external supply off an fold behind the printer. There is also an optional rotating media supply hub. Also see Chapter 9, "Options."



TheEasyCoderPF4iCompactIndustrialusesamediasupplyrollpost thatcanbefittedinthreedifferentpositionsinsidethemediacompartment.Thepositiondependsonthetypeofsidedoorandwhetherthe printerisfittedwithanintegrallinertakeupornot.Alternatively,an externalmediasupply(forexampleaboxoffan-foldedtickets)behind theprintercanbeused.Arotatingmediasupplyhubisalsoavailableas anoption,seeChapter9,“Options.”

Media Supply Roll Post

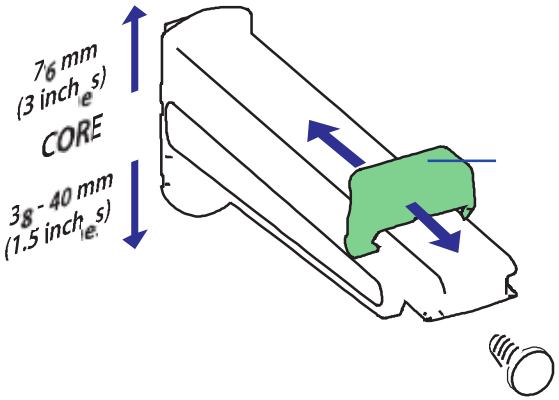
Themediasupplyrollpostfitsboth38-40mm(1.5inches)and76mm (3.0inches)coressinceitcanbemovedverticallyintheslotinthecenter section.Thebottompositionisintendedforsmallcoresandthetop positionisforlargecores.Thepostislockedbyastraight-slotscrewand hasamoveableedgeguidetofitvariousmediawidths.

Edge guide

Screw

Tomovethepost toadifferentslot;removethescrew,twisttheposta quarterofaturn,andpullitout.

Tofitthepost;rotateitaquarterofaturn,insertitintotheappropriateslotinthecentersection(seenextpage),andtwistbacksothelips engagethecutoutsinthesidesoftheslot.Moveitup(largecore)or down(smallcore)asfarasitgoesandsecureitwiththescrew.

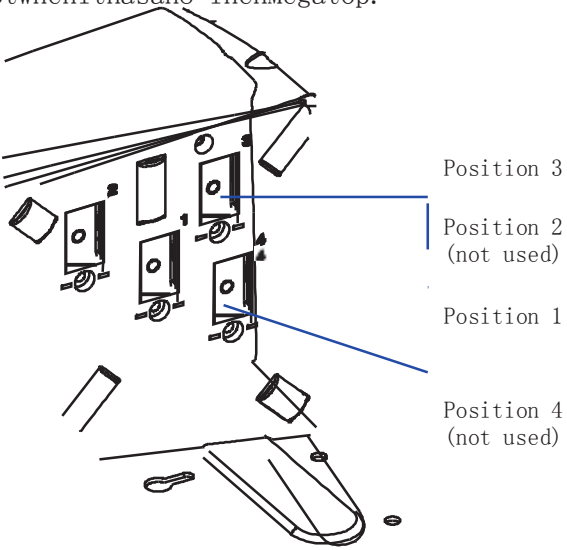

76 mm
(3 inches)
CORE
38 - 40 mm
(1.5 inches)

Media Supply Positions

Therearefoursetsofslotsandthreadedholesintheprinter's centersection forthemediasupplyrollpostorrotatinghub(optional).Theseslots allowthelargestpossiblerollsizeto t,giventhelimitationsofanyliner takeupunitand/orthefullenclosureprovidedbythelongsidedooror Megatop.Thepositionsareindicatedbynumbersengravedinthecenter section.

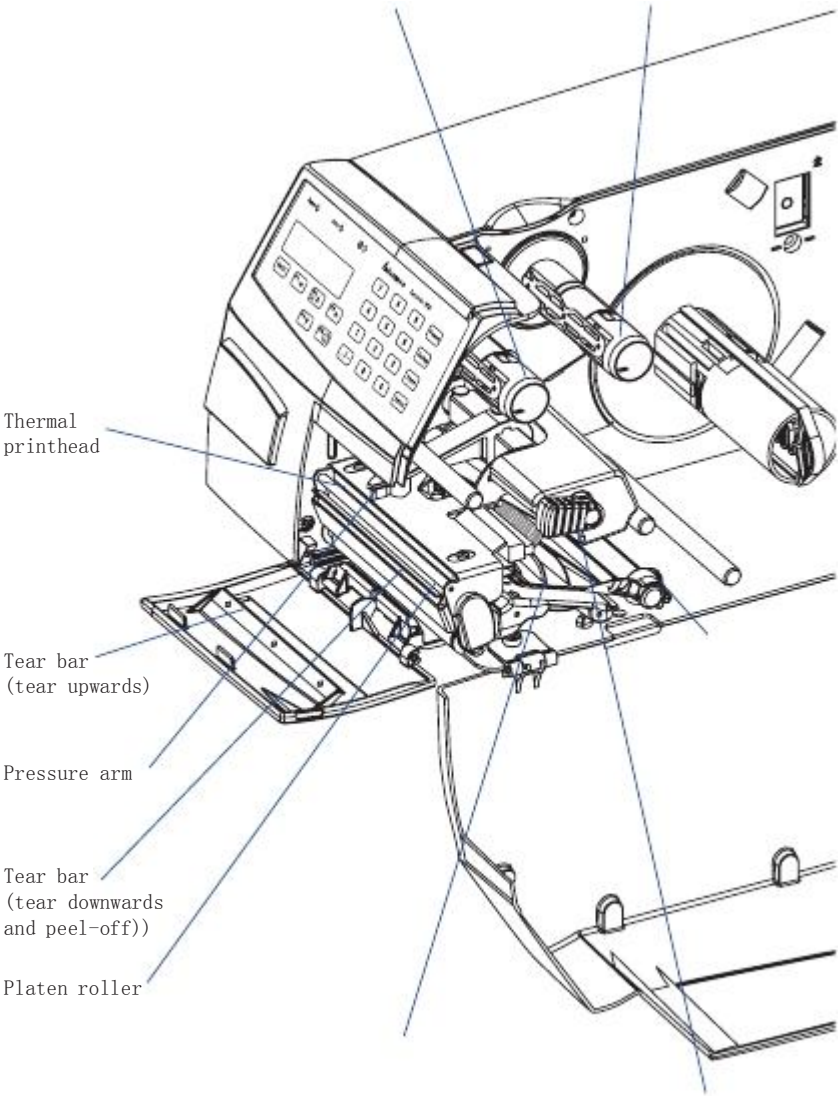
- Position1isusedwhenthemediacompartmentisfullyenclosedbya longsidedoor,regardlessoftheexistenceofanyintegrallinertakeup unit.Maximumrollsizeis152mm(6inches).
- Position2isnotused.
- Position3isusedwhentheprinterhasanintegrallinertakeupunit andalongsidedoor.Thispositionisalsousedwiththe8-inch Megatop.Maximumrollsizeis213mm(8.38inches).
- Position4isnotused.

Theprintercanalsouseanexternalmediasupplylocatedbehindthe printer,exceptwhenithasan8-inchMegatop.



Print Mechanism

Theprintmechanismfeaturesahigh-performancethermalprinthead withquick-mountfittingstofacilitatereplacement.



Connections

Power

1 Place the printer on a level surface, near an AC outlet. You should be able to access the printer to load supplies and to remove the printout.

2 Check that the printer is switched off.

3 Connect the power cord from the socket on the rear plate to a electrical outlet (90 to 265 VAC).

Computer

The Easycoder PF4i Compact Industrial is fitted with one 9-pin D-style subminiature (DB9) socket for the RS-232 serial interface port and one class B connector for the USB interface port (see Appendix C).

RS-232 Serial Interface ("uart1:")

Use the serial interface with Intermec Label Shop or the Intermec Inter-Driver. Also use it with the Intermec Direct Protocol or the Intermec Fingerprint programming language because you can receive error messages from your printer. Before you can use the serial interface, you may need to set up the communication parameters, such as baudrate, parity, etc. as described in Chapter 6, "Setting Up the Printer."

USB Interface ("usb1:")

Use the USB interface with an USB-compatible version of the Intermec InterDriver for printing. The USB interface is not suitable for programming because the host cannot receive error messages from your printer.

Optional Interface and Network Boards ("uart2:", "uart3:", "centronics:", or "net1:")

Several types are available (see Chapter 9, "Options"). Refer to Chapter 6, Chapter 7, and Appendix C for connection and setup instructions.

The printer can be set to scan all communication ports. When it detects incoming data on a port, the printer automatically switches to use that port for both input and output. This facility ("auto") can be selected in Intermec Shell (see Chapter 8) or using the Intermec Fingerprint instruction SETSTDIO, see *Intermec Fingerprint v8.xx, Programmer's Reference Manual*. Use the <F5/i> key to get information on the active communication channels.

Switch off both PC and printer before connecting them together.

Controls and Indicators

TheEasyCoderPF4iCompactIndustrialhasseveralwaysofcommunicatingdirectlywithitsoperator:threecoloredindicatorlamps,adisplay window,amembrane-switchkeyboardwith22programmablekeys,abig programmable “Print” buttonontheprinter’ sfront,andabeeper.

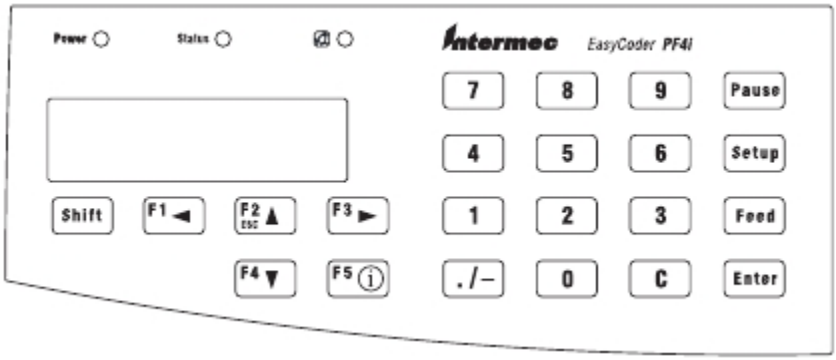
Indicator Lamps

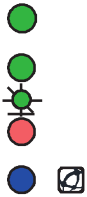
TheindicatorsarecoloredLEDs(LightEmittingDiodes)andareused forthefollowingpurposes:

Power(solidgreen)indicatesthatthepowerison.

Status(solidgreen)indicatesthattheprinterisreadyforuse.
Status(flashinggreen)indicatesthattheprinteriscommunicating.
Status(solidred)indicatesanerrorcondition(seeChapter10).

IntermecReadinessIndicator(blue;on,blink,oroff).
Representedbyabluelightonintermechandheldcomputers,access points,andprinters,theIntermecReadinessIndicatorispartofan exclusivemonitoringsystemfromIntermec.TheIntermecReadiness Indicatorhelpsusersquicklydeterminethereadinessoftheintermec deviceindividuallyandaspartofasolution.TheIntermecReadiness Indicatorhasthreedifferentstates:On,Blinking,andOff.Whenthe Indicatorisoff,thedeviceisnotreadytooperateindividuallyoras partofasolution.WhentheIndicatorisblinking,thedevicemaybe initializing,waitingforexternalresources,orinneedofuserattention.AndwhentheIndicatorisOn,thedeviceisreadyforuseas partofasolution.AlsoseeChapter10.


Power
Status
Intermec
EasyCoder PF4i
7
8
9
Pause
4
5
6
Setup
Shift
F1
F2
ESC
F3
1
2
3
Feed
F4
F5
. / –
0
C
Enter



Display

Thedisplaywindowcontainsan LCD (LiquidCrystalDisplay) with backgroundilluminationandtwolinesoftext, eachwith16characters. Itguidestheoperatorthroughthesetupandindicatespossibleerrors duringprinting.

TheIntermecFingerprintprogramminglanguageandtheIntermec DirectProtocolallowcustom-mademessagestobecomposedanddis-playedaccordingtotherequirementsoftheapplication.

Keyboard

Thekeyboardisofthemembrane-switchtypeandhas22keys. Thekey-boardissupplementedbyalarge “Print” buttonontheprinter’ sfront. Somekeyshavehard-codedfunctionsinthestartupandsetupmodes.

Print button

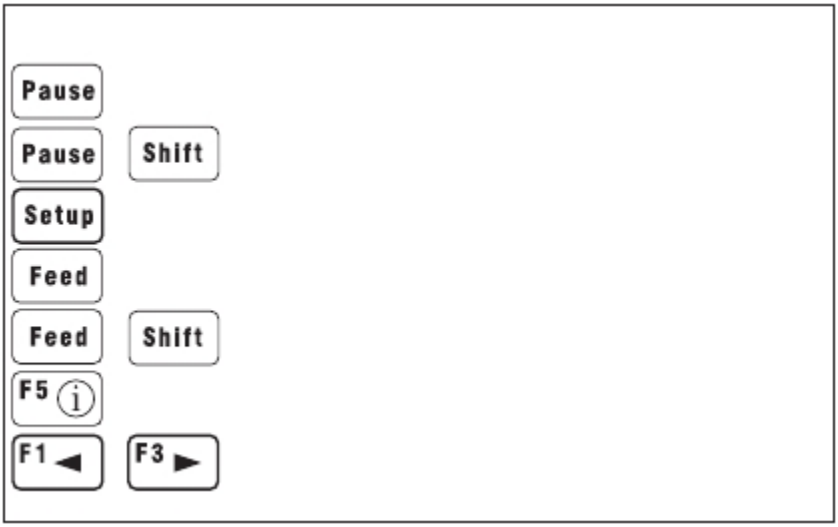
+

+

Displayerrormessages, IRIstatus, andcommunicationchannel information.
Scrollbetweenvarioustypesofinformationafterpressingthe <F5/i>key. Possibleerrormessagesandinformationonactive communicationchannelsareshowninaloop.

KeyboardColorCode
YellowOperationoftheprinter(operatorlevel)
GreenSetuporservice(siteorservicetechnicianlevel)
WhiteDatainputtoprinter(operatorortechnicianlevel)

InapplicationprogramscreatedusingtheIntermecFingerprintpro-gramminglanguage, thekeyscanbeassignedtovariousfunctionsor bedisabledindividually. Sinceonekeyisassignedasshiftkey, upto44 differentkeycombinationsarepossible. Anaudiblesignal, whichcanbe turnedoffifsodesired, acknowledgesthatakeyhasbeenpressed.


Pause
Pause
Shift
Setup
Feed
Feed
Shift
F5
F1
F3

Beeper

The beeper notifies the operator when an error has occurred and acknowledges that a key has been pressed. The Intermec Fingerprint programming language allows the key acknowledge signal to be turned off. The frequency and duration of signals can be specified. Thus, it is possible to create different signals for different conditions so reventomake the printer play simple melodies!

3 Starting Up

Thischapterexplainshowtostartuptheprinterafter installationorafterhavingbeenswitchedoff.Itcover s
thefollowingtopics:

- Startupfiles
- Memorycards
- Switchingontheprinter
- Displaymessagesatstartup

s Guide (Fingerprint)

Startup Files

When the printer is switched on, its behavior depends on the existence of a startup file (autoexec.bat) in its memory. There are two cases:

A The printer is only fitted with the IntermecShell file-managing program, which allows the operator to choose between a variety of applications and functions.

B In addition to IntermecShell, the printer is also fitted with a custom-made application program that is design to perform a specific task, for example to print tickets, baggage tags, or product labels for a certain company. Such a program may be initiated by a startup file (autoexec.bat) stored in the printer's permanent memory or in a memory card.

There can be one startup file stored in each of three different parts of the printer's memory. If there are startup files stored in more than one part, only one will be used with the following priority:

1. An autoexec.bat file stored in a memory card, provided the card was inserted in the printer before the power was switched on.
2. An autoexec.bat file stored in the read/write part of the printer's permanent memory (device"/c").
3. The pup.bat file (IntermecShell) in the read-only part of the printer's permanent memory (device"/rom").

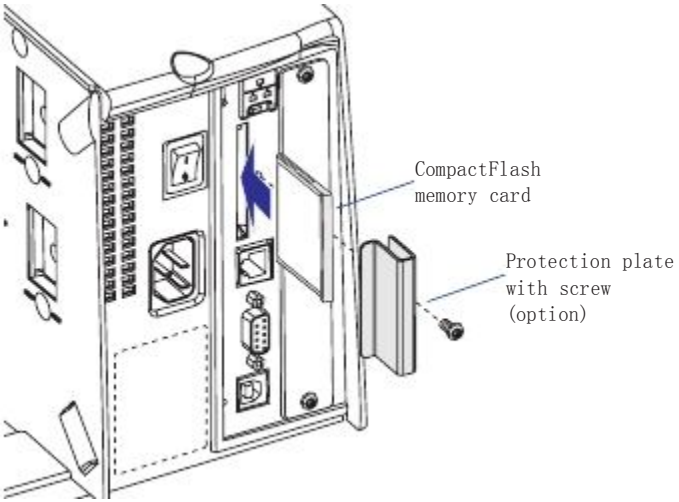
> **Note:** If you insert a CompactFlash memory card that contains a startup file before you switch on the printer, this startup file will be used instead of IntermecShell.

Memory Card

Ifyouwanttouseamemorycard,youmustinsertitintotheslotinthe printer’srearplatebeforeyouswitchonthepower.Thememorycard mustbeaCompactFlashcard(8MB-1GB).CompactFlashcardsmarked “CF+”willnotwork.YoucanusetheCompactFlashcardtoexpandthe printer’sstoragememory(″card1:″).Therearealsothreetypesofprepro-grammedCompactFlashcards:

- FontCardsprovideadditionalfontsthatcanbeusedaslongasthe cardremainsinsertedintheprinter.
- FontInstallCardspermanentlyinstalladditionalfontsintheprinter, whichcanbeusedevenafterthecardhasbeenremoved.
- FirmwareCardsautomaticallyreplacetheprinter’sfirmware,usually withanupdatedversion.

CompactFlashcardsarewidelyusedforconsumer’scomputerproducts likedigitalcameras.Youcangetacertainprotectionfromtheftbyinstall-inganoptionalplatethatcoversaninsertedCompactFlashcard.



Note: Alwaysswitchoffthepowerbeforeinsertingorremoving amemorycard!Thecardwillonlyfitinoneway.Amemory cardisonlydetectedifitisinsertedbeforetheprinteris started.

Switching On the Printer

Beforeswitchingontheprinter,makethenecessaryconnections,insert anymemorycardyouwanttouse,andcheckthattheprintheadis engaged.

SwitchonthepowerusingtheOn/Offswitchontherearplate.The "Power" controllamponthefrontpanellightsupwhenthepowerison. Waitforafewmoments,whiletheprinterloadstheprogramandruns someself-diagnostictests:

```
Starting
```

Afterashorttime,theprinterisinitialized.Theprogressoftheinitializationisindicatedbyanincreasingnumberofcolonsonthelowerlinein thedisplay:

```
Initializing
:::
```

Thetypeofstartupfilerunningintheprinterisindicatedbythemessage shownin thedisplaywindowimmediatelyafterinitialization.

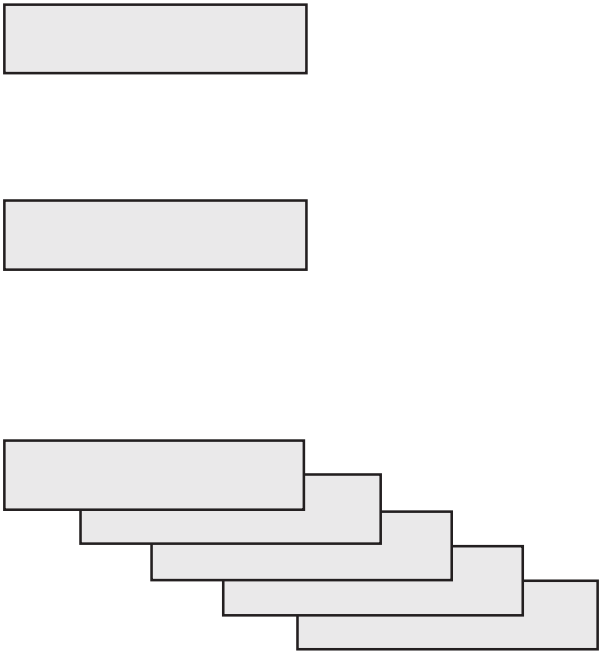
A. Intermec Shell Startup Program

```
ENTER=SHELL
5 sec.  v.8.1
     4 sec.  v.8.1
          3 sec.  v.8.1
               2 sec.  v.8.1
                    1 sec.  v.8.1
```

RefertoChapter8formoreinformationonIntermecShell.Thedigits inthelowerrightcornerofthedisplayindicatetheversionofIntermec Shell.

B. Custom-Made Application Program

Anyotherdisplaymessagesthanthoseillustratedaboveindicatesthatthe printerisrunningsomecustom-made,non-standardapplicationprogram,orthatsomeerrorhasoccurred.



4 Media Load

Thischapterexplainshowtoloadtheprinterwith media,thatislabels,tickets,tag,orstrips,forthefo l-
lowingmodesofoperation:

- Tear-Off(straight-through)
- Tear-OffwithQuick-Load(straight-through)
- Cut-Off
- Peel-Off(self-strip)
- Externalsupply(fan-folds)

s Guide (Fingerprint)

Tear-Off (Straight-through)

TheEasyCoderPF4iCompactIndustrialcanprintonlabels,tickets, tags,andcontinuousstockinvariousforms.Thissectiondescribesthe casewhenthemediaistornoffmanuallyagainsttheprinter’ stearbar. Thismethodisalsoknownas “straight-throughprinting.”

Usethe<Feed>key(seefigure#10)whenloadingthesametypeof media.Whenswitchingtoanewtypeofmedia,orifttheprinterdoesnot feedoutthemediaproperly,simultaneouslypressthe<Shift>and<Feed> keystoperforma “testfeed.”

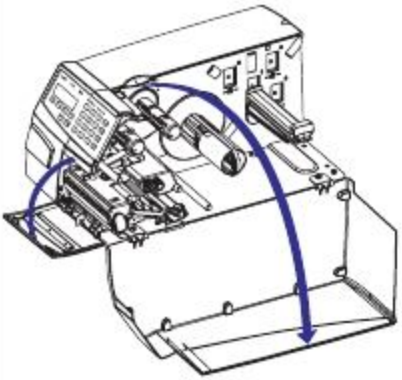
Tear-offcanbeusedfor:

- Non-adhesivecontinuousstock
- Self-adhesivecontinuousstockwithliner
- Self-adhesivelabelswithliner
- Ticketswithgaps,withorwithoutperforations
- Ticketswithblackmarks,withorwithoutperforations

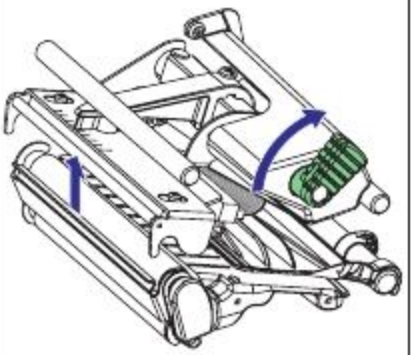
Anoptionallabeltakensensorcanholdtheprintingofthenextcopy inthebatchuntilthepresentcopyhasbeenremoved,seeChapter9, “Options.”

Tear-Off , cont.

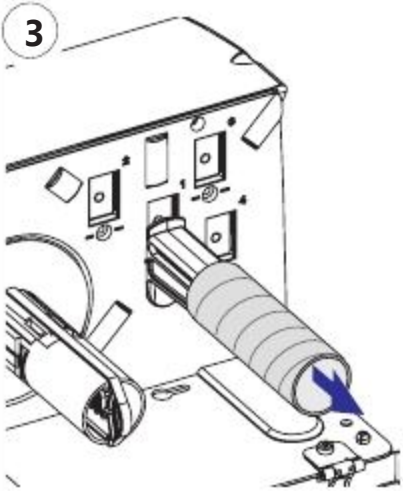
1



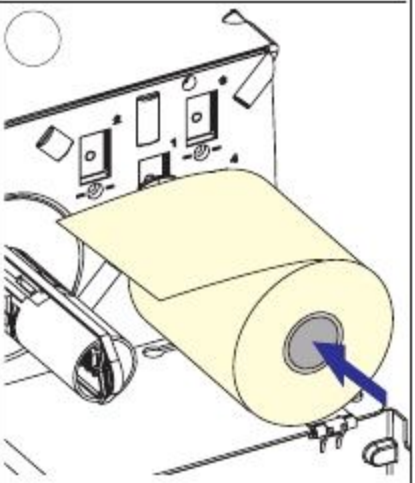
Open the front and side doors.



3

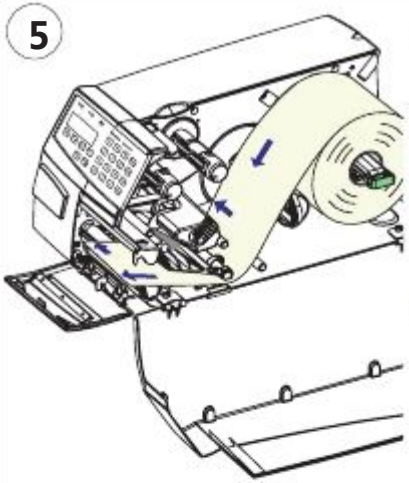


If necessary, fold down the edge guide. Remove any empty core from the media supply roll post.

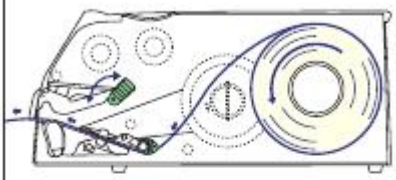


Tear-Off , cont.

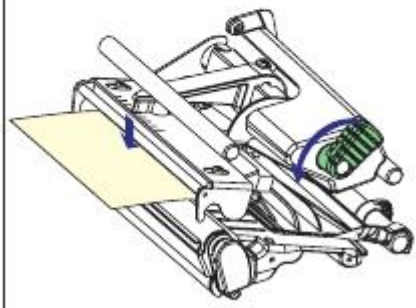
5



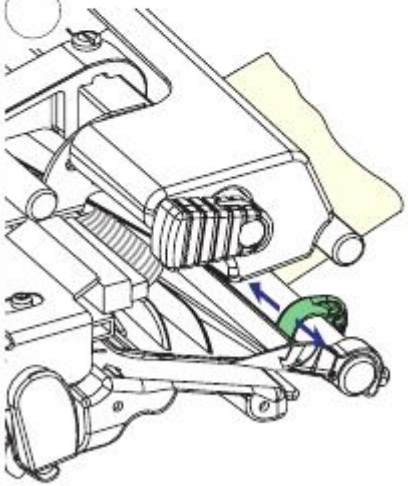
Route the media through the print mechanism. Then push it inwards as far as it will go. Close the edge guide on the media supply post.



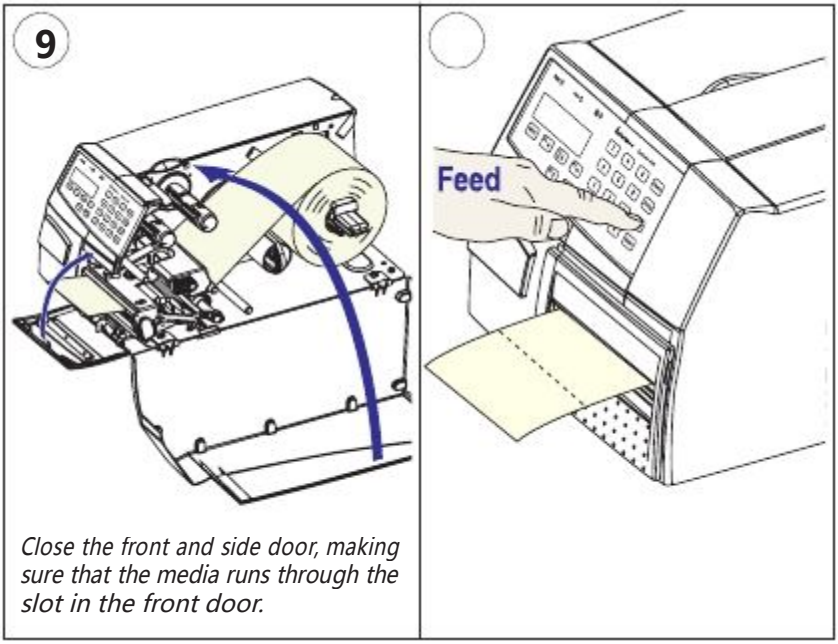
7



Turn the printhead lift lever counter-clockwise to engage the printhead.



Tear-Off , cont.



Close the front and side door, making sure that the media runs through the slot in the front door.

Tear-Off with Quick-Load (Straight-through)

In addition to the media load procedure for tear-off (straight-through) operation described earlier in this chapter, the EasyCoder PF4i Compact Industrial can optionally be fitted with a set of Quick-Load guides that makes media load much easier and quicker.

The printer is normally delivered with two different sets of Quick-Load guides: wide and narrow. The wide type generally guides the media better, but the media must be at least 80mm (3.15 inches) wide. The narrow type allows a media width as narrow as 40mm (1.57 inches), but it may be less suited for wide and thin media.

Quick-Load cannot be combined with peel-off (self-strip) operation.

An optional label taken sensor can hold the printing of the next copy in the batch until the present copy has been removed, see Chapter 9, "Options."

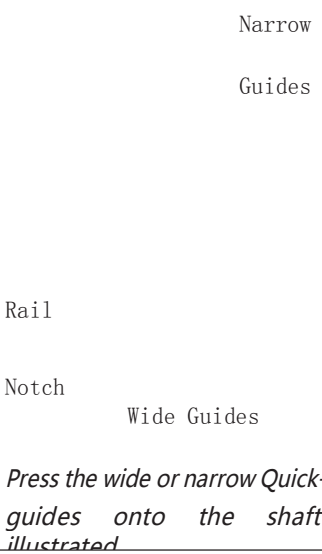
Use the <Feed> key (see figure #5) when loading the same type of media. When switching to a new type of media, or if the printer does not feed out the media properly, simultaneously press the <Shift> and <Feed> keys to perform a "test feed." Fully automatic loading, without the operator having to press any key, requires a special set of Intermec Fingerprint instructions in the application program.

Tear-Off with Quick-Load, cont.

1

Lift up the upper media guide and

2



Press the wide or narrow Quick-Load guides onto the shaft as illustrated.

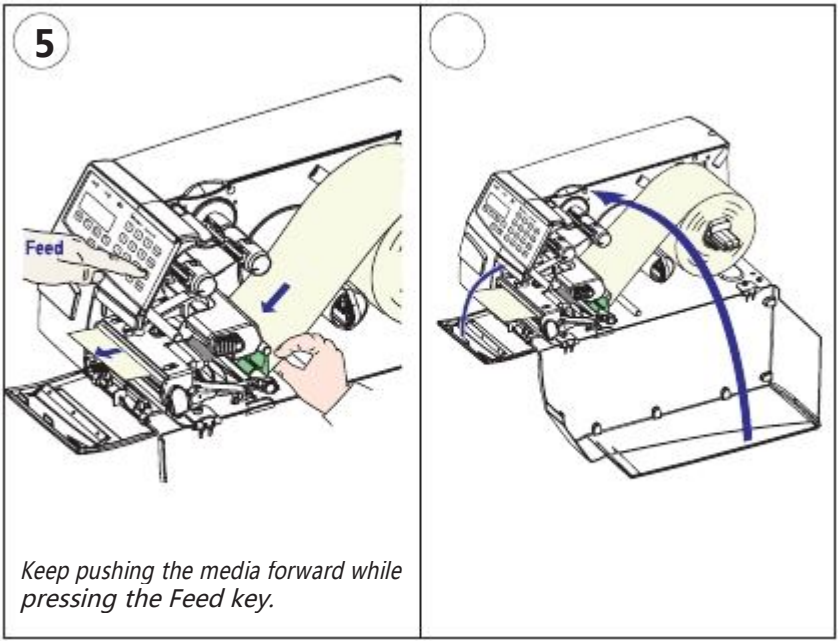
3

If necessary, adjust the outer Quick-Load guide to fit the width of the media.

4

Insert the media between the

Tear-Off with Quick-Load, cont.



Keep pushing the media forward while pressing the Feed key.

Cut-Off

TheEasyCoderPF4iCompactIndustrialcanprintonlabels,tickets,tags,andcontinuousstockinvariousforms.Thissectiondescribesthecasewhenthemediaistobecutoffbyanautomaticpapercutter(option).

Usethe<Feed>key(seefigure#12)whenloadingthesametypeofmedia.Whenswitchingtoanewtypeofmediaoriftheprinterdoesnotfeedoutthemediaproperly,simultaneouslypressthe<Shift>and<Feed>keystoperforma“testfeed.”

Cut-offcanbeusedfor:

- Non-adhesivecontinuousstock
- Self-adhesivelabelswithliner(cutonlylinerbetweenlabels)

Thecutterisdesignedtocutthroughpaper-basedmediawithathicknessbetween60and175µm,whichroughlycorrespondstoapaperweightof60to175grams/m^2(basisweight40to120lb).Thecuttershouldnotbeusedtocutthroughlabels,becausetheadhesivewillsticktotheshears,whichcandamagethecutter.

Thecutterisheldbyasnap-lockandcanbetiltedforwardtofacilitatemediaload.Aswitchpreventsthecutterfromoperatingwheninopenposition.

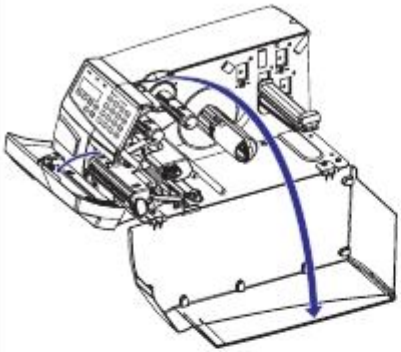
Theoptionallabeltakensensorcannotbeusedwiththecutter.

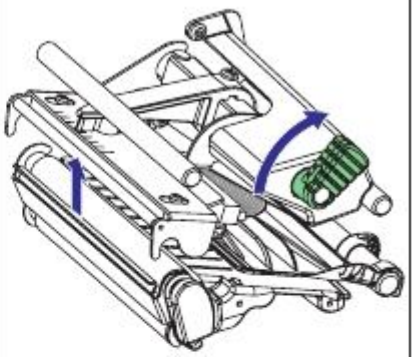
Thepapercuttercanbeusedwithbothastandardedgeguideand Quick-Loadguidesandwithanytypeofsidedoor.Inthischapter,aprinterwithastandardedgeguideandalongsidedoorisillustrated.

Thereisnofrontdoorwhenacutterisinstalled.

Cut-Off , cont.

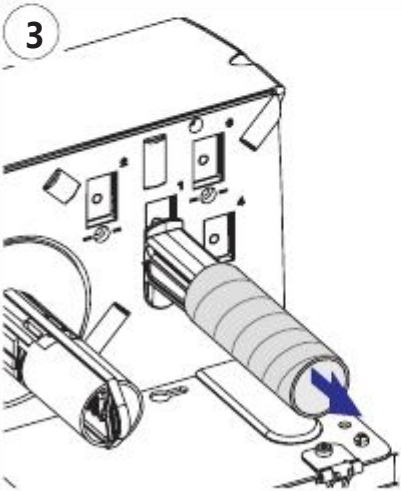
1

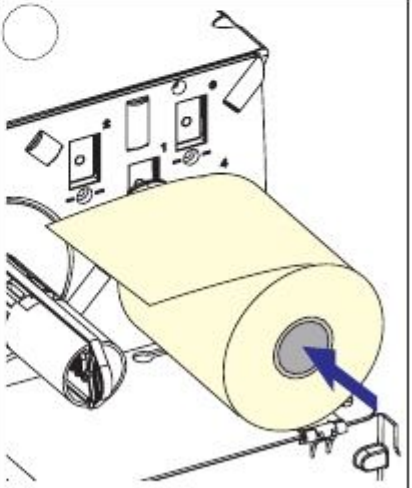




Open the cutter and the side door.

3

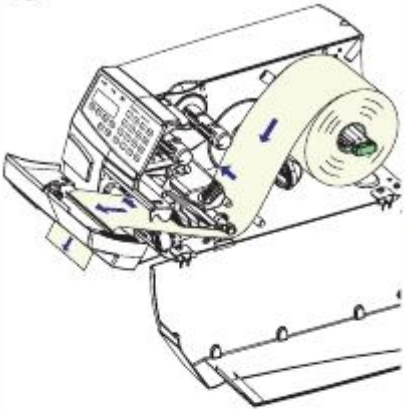




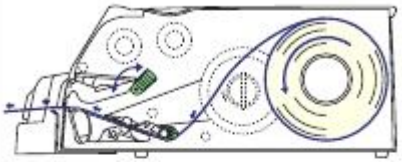
If necessary, fold down the edge guide. Remove any empty core from the media supply roll post.

Cut-Off , cont.

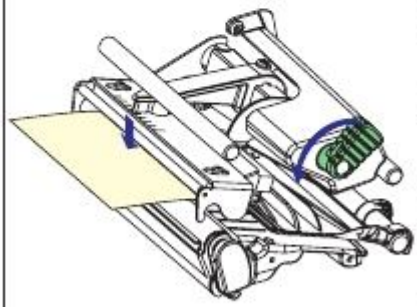
5



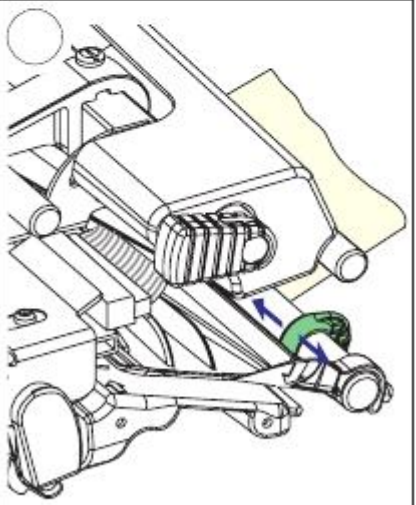
Route the media through the print mechanism and cutter. Then push it towards the center section as far as it will go.



7

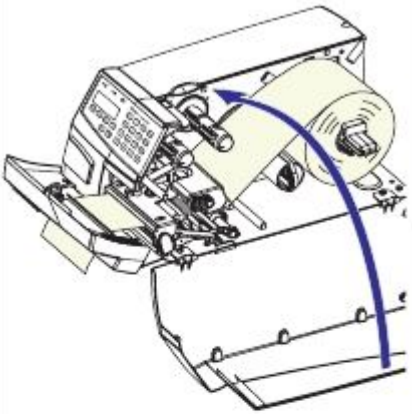


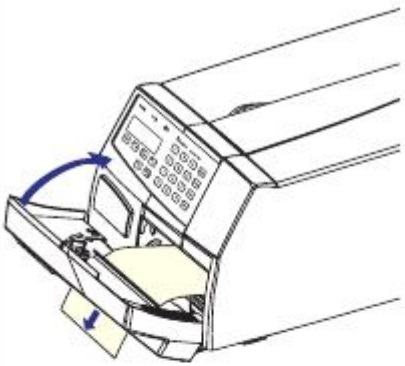
Turn the printhead lift lever counter-clockwise to engage the printhead.



Cut-Off , cont.

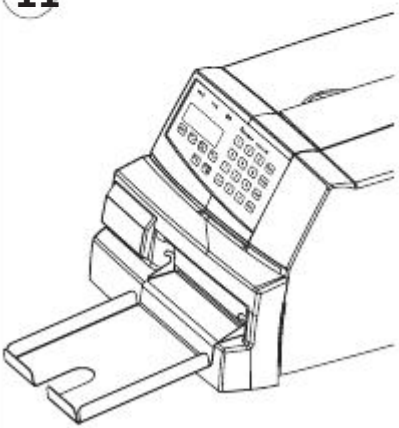
9

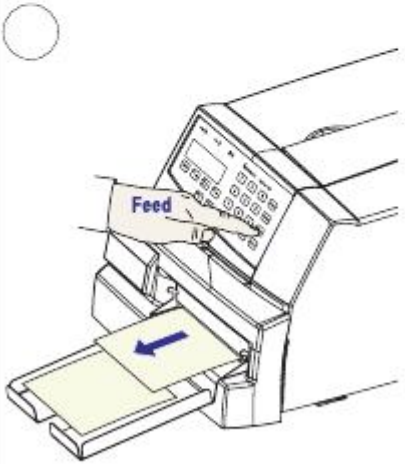




Close the side door.

11





An optional tray can be attached to the cutter to collect the cut off labels, tickets, or tags.

Peel-Off (Self-strip)

TheEasyCoderPF4iCompactIndustrialcanprintonlabels,tickets, tags,andcontinuousstockinvariousforms.Thissectiondescribesthe casewhenself-adhesivelabelsareseparatedfromthelinerimmediately afterprinting.Thelineristhenwounduponanintegrallinertakeup hub.Thisisalsoknownas“Self-strip”operation.

Peel-offoperationcannotbeperformedwhenQuick-Loadguidesare fitted.

Usethe<Feed>key(seefigure#13)whenloadingthesametypeof media.Whenswitchingtoanewtypeofmedia,oriftheprinterdoesnot feedoutthemediaproperly,simultaneouslypressthe<Shift>and<Feed> keystoperforma“testfeeed.”

Peel-offcanonlybeusedfor:

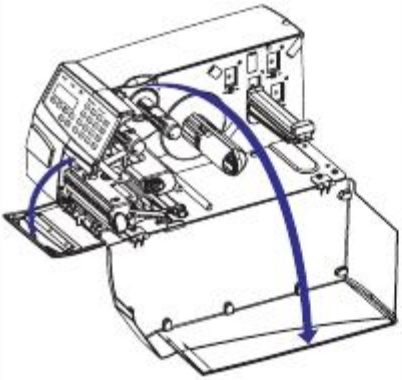
- Self-adhesivelabelswithliner

Anoptionallabel-takensensorcanholdtheprintingofthenextlabel inabatchuntilthepresentlabelhasbeenremoved,seeChapter9, “Options.”

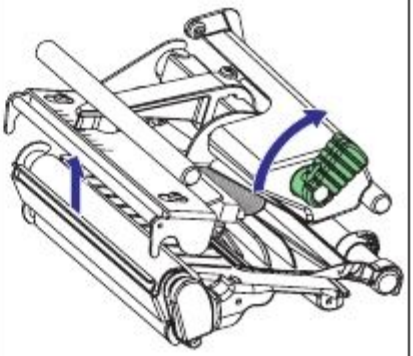
> **Note:**Peel-offoperationsetshighdemandsonthemediain regardoflabelstiffness,releasecharacteristicsoftheadhes ive
> andliner,resistanceagainstelectrostaticchargingetc.,sot he
> labelswillbedispensedproperly.Consultyourmediasupplier ortestthemediatoascertainthatitissuitableforyourapplica –
> tion.

Peel-Off , cont.

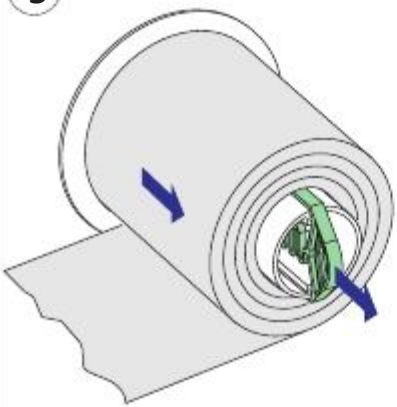
1



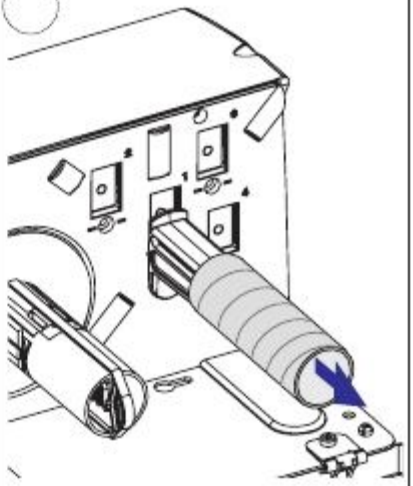
Open the front and side doors.



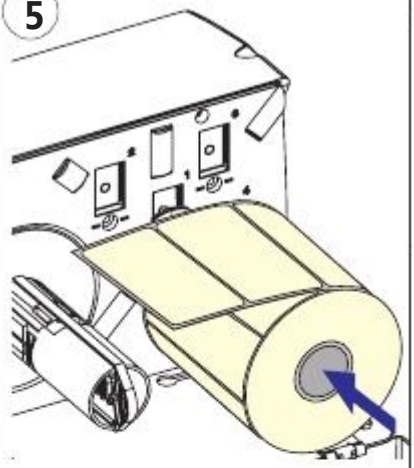
3

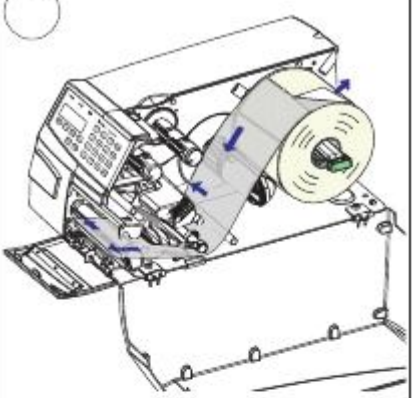


Pull out the handle to collapse the takeup hub, then remove any liner.

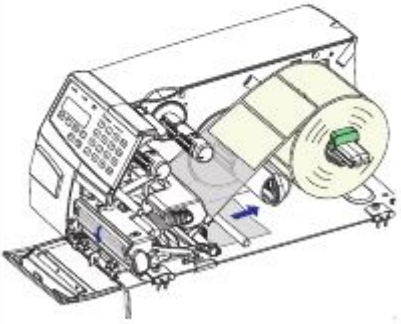


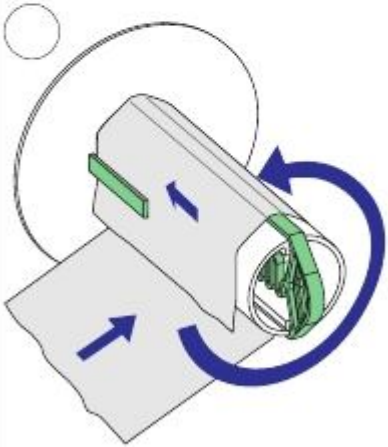
Peel-Off , cont.





Fit a new roll of labels on the supply post.

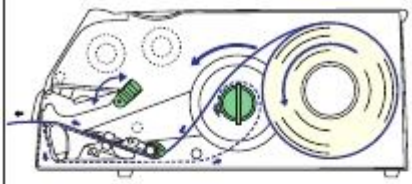




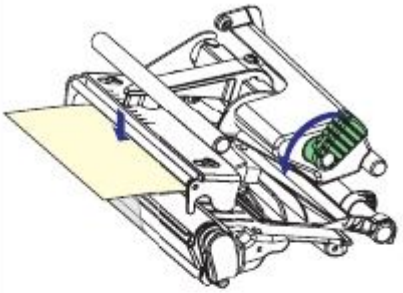
Close the edge guide on the supply post. Route the liner around the tear bar and the liner drive roller and back under the print mechanism and guide shaft.

Peel-Off , cont.

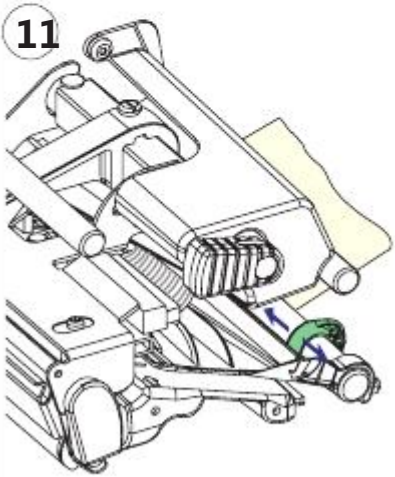
9



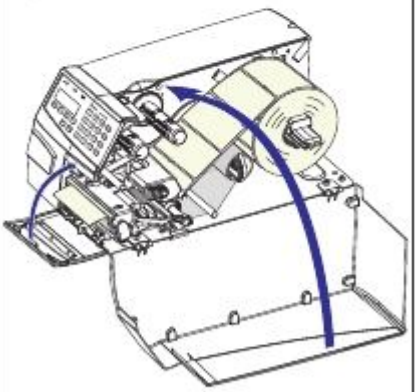
This diagram shows the media and liner paths.



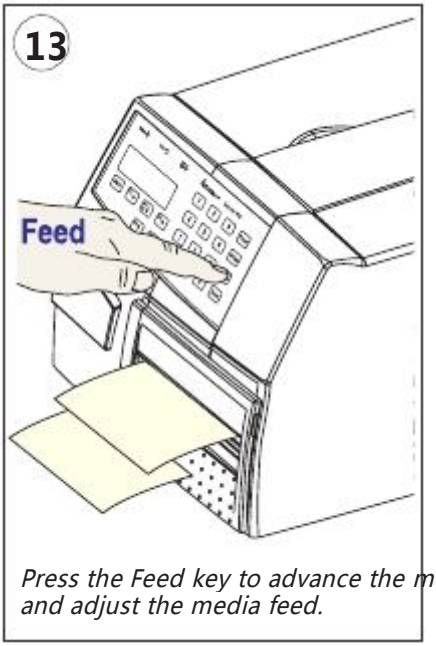
11



Adjust the position of the green edge guide so the media is guided with a minimum of play.



Peel-Off , cont.



Press the Feed key to advance the media and adjust the media feed.

External Supply (Fan-fold)

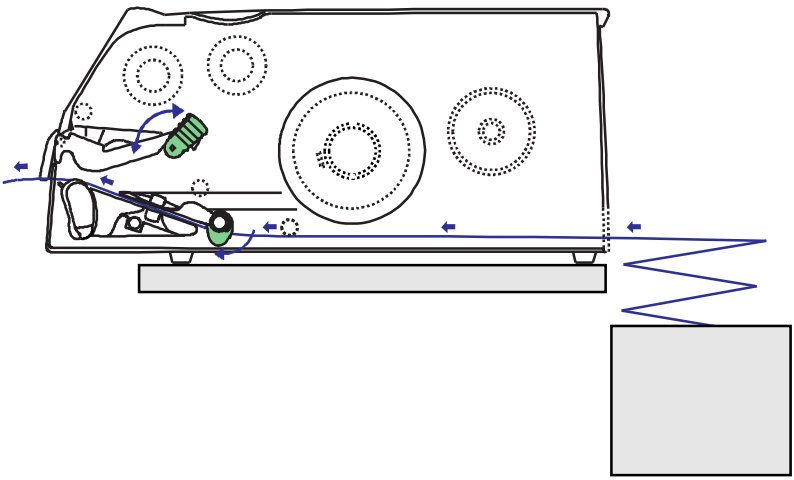
TheEasyCoderPF4iCompactIndustrialcanprintonlabels,tickets, tags,andcontinuousstockinvariousforms.Thissectiondescribesthe casewhenthemediasupplyisplacedbehindtheprinter,usuallyinthe formoffan-foldedticketsortags.Externalsupplycanbeusedwithtear-off(straight-through)printing—preferablywithQuick-Load.

Externalsupplycanonlybeusedwithalongsidedoor,notthemegatop. Thereisnoneedtoremovethemediasupplyrollpost.

Whenusinganexternalmediasupply,takecaretoprotectthemedia fromdust,dirtorotherforeignparticles,thatcanimpairtheprintout qualityorcauseunnecessaryweartotheprinthead.

Dependingonbrandandquality,alldirectthermalmediaaremoreor lesssensitivetoheat,directsunlight,moisture,oil,plasticizers,fat,and othersubstances.Youshouldprotectthemaccordingly.

This diagram shows the media path from an external supply. In case of the standard edge guide (as opposed to Quick-Load guides), turn it to vertical position.



5 Thermal Transfer Printing

Thischapterexplainshowtoloadtheprinterwith ribbonforthermaltransferprinting.

Ribbon Load

TheEasyCoderPF4iCompactIndustrialcanprintonlabels,tickets,tags,andcontinuousstockusingeitherdirectthermalprintingonspecialheat-sensitivemediaorthermaltransferprintingusingaspecialink-coatedribbon.

Thermaltransferprintingmakesitpossibletouseawiderangeofreceiv-ingfacematerialsandgivesadurableprintoutlessvulnerabletofat,chemicals,heat,sunlightetc.thandirectthermalprinting.Makesuretoselectatypeofribbonthatmatchesthetypeofreceivingfacematerialandtosetuptheprinteraccordingly.

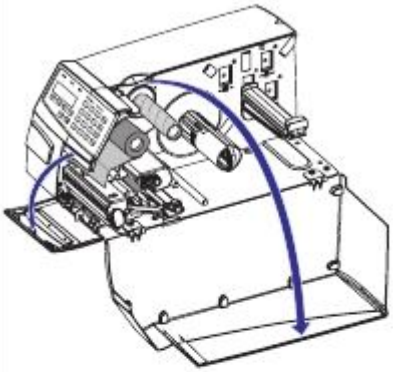
TheEasyCoderPF4iCompactIndustrialcanusetransferribbonrollswoundwiththeink-coatedsidefacingeitheroutwardorinward.Illustra-tionsinthismanualshowtheink-coatedsidefacinginward.

Evenifribbonusuallyisloadedinconnectionwithmediareplenishment,noloadedmediaareshownintheillustrationsinthischapterinorderto giveaclearerviewoftheribbonpath.RefertoChapter4formediaload instructions.

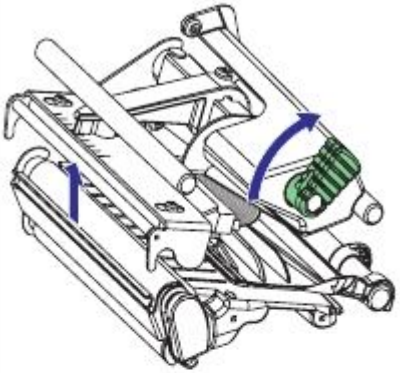
Mosttransferribbonsdonotsmearatroomtemperature.

Ribbon Load, cont.

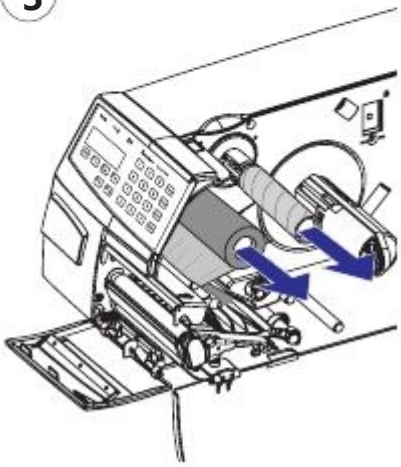
1



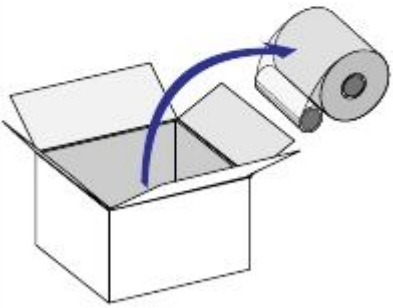
Open the front and side doors.



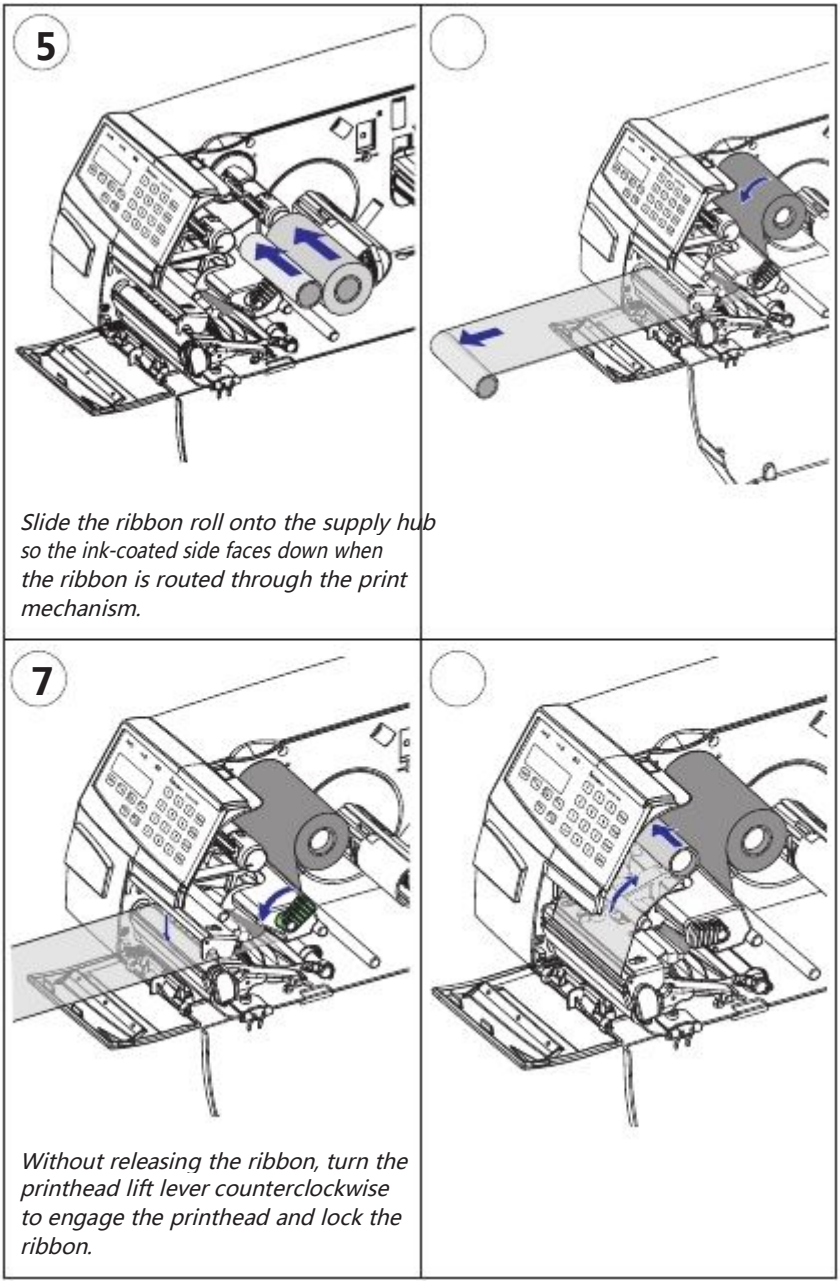
3



In case of ribbon reload, remove any used ribbon and empty ribbon core.



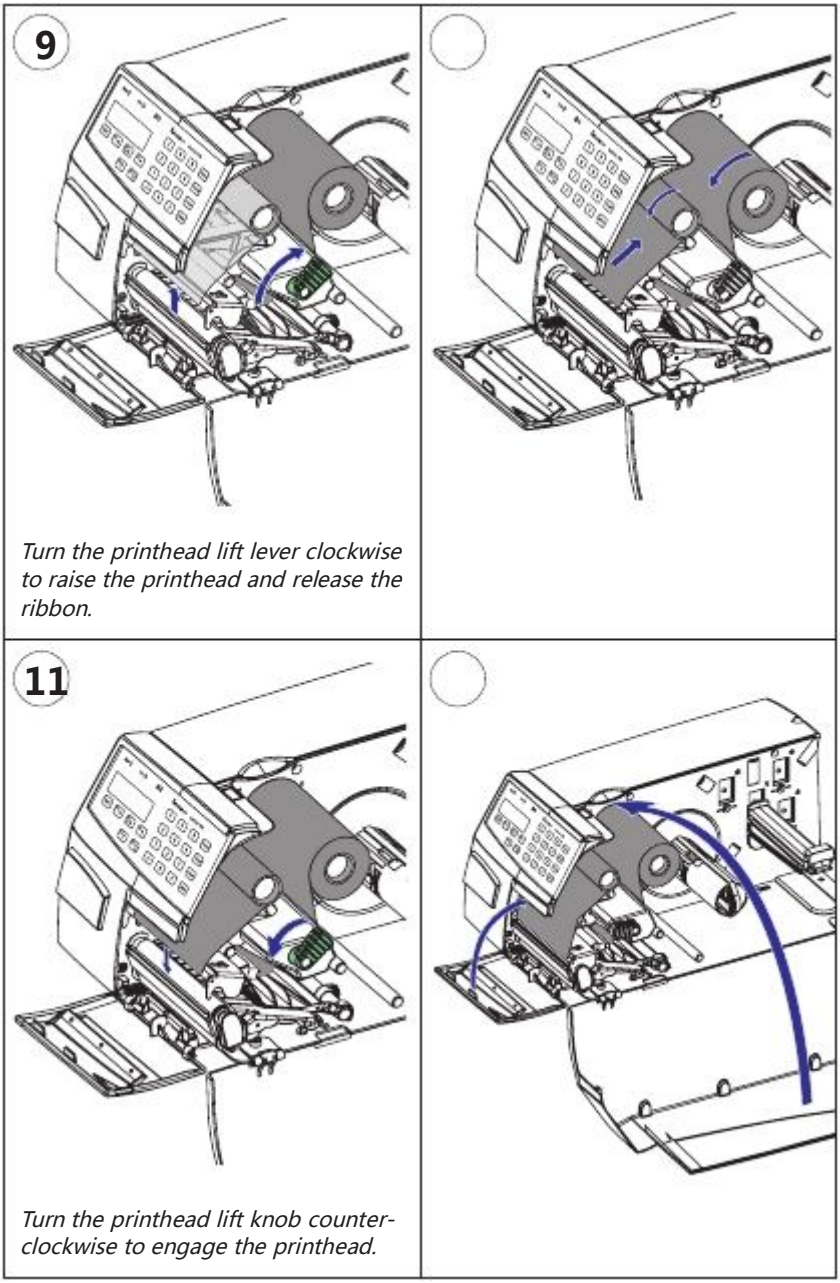
Ribbon Load, cont.



Slide the ribbon roll onto the supply hub so the ink-coated side faces down when the ribbon is routed through the print mechanism.

Without releasing the ribbon, turn the printhead lift lever counterclockwise to engage the printhead and lock the ribbon.

Ribbon Load, cont.



Turn the printhead lift lever clockwise to raise the printhead and release the ribbon.

Turn the printhead lift knob counter-clockwise to engage the printhead.

6 Setting Up the Printer

This chapter describes the various parameters that are used in the Setup Mode (see Chapter 7) or in the various application programs to configure the printer for the user's specific requirements. It covers the following topics:

- Description
- Default setup
- Setup Parameters in regard of communication, feed adjust, media, and print defines.

When measures are specified as "dots", the actual length in millimeters or inches depends on the printhead density. Convert as follows:

8 dots/mm (203.2 dots/inch) printhead:
1 dots = 0.125 mm = 0.0049 inches (4.9 mils)

11.81 dots/mm (300 dots/inch) printhead:
1 dot = 0.085 mm = 0.0033 inches (3.3 mils)

Description

The setup controls the printer in regard of serial communication, media feed, and print speed, and specifies which type of media and (optionally) ribbon is loaded in the printer.

Check the list of the printer's default setup parameters on the next page to see if they match your requirements. If not, you will have to change the setup using one of the methods described below. The setup may also be changed by IntermecPrintSet, InterDriver, and LabelShop, or third-party application programs.

Setup Mode

- Press the <Setup> key on the printer's built-in keyboard to enter the Setup Mode, or
- select the Setup option in IntermecShell to enter the Setup Mode, or
- execute the Intermec Fingerprint **SETUP** instruction to enter the Setup Mode, or
- access the Setup Mode via the printer's home (requires an optional EasyLAN interface board).

  See Chapter 7, "Setup Mode" in this manual and the EasyLAN documentation.

Intermec Fingerprint

- Use **setup strings** to change individual setup parameters remotely from the host, or
- use **setup files** to create sets of setup parameters remotely from the host.

  See the *Intermec Fingerprint v8.xx* manuals.

Intermec Direct Protocol

- Use **setup strings** to change individual setup parameters remotely from the host.

  See the *Intermec Direct Protocol v8.xx* manuals.

Default Setup

Theprinter ,
sdefaultsetupislistedbelow(assumingnooptionsinstalled):

Ser-Com uart1:	
Baudrate	9600bps
Characterlength	8bits
Parity	None
Stopbits	1bit
RTS/CTS	Disable
ENQ/ACK	Disable
XON/XOFF,datatohost	Disable
XON/XOFF,datafromhost	Disable
Newline	CR/LF
Receivebuffer	1024bytes
Transmitbuffer	1024bytes
Feedadjust:	
Startadjust	0
Stopadjust	0
Media:	
X-start(8dots/mm=203.2dpi)	24
X-start(11.81dots/mm=300dpi)	36(option)
Width(8dots/mm=203.2dpi)	832
Width(11.81dots/mm=300dpi)	1248(option
Length(8dots/mm=203.2dpi)	1200
Length(11.81dots/mm=300dpi)	1800(option
Mediatype	Label(wGaps
Papertype	Thermaltran
Ribbonconstant	90
Ribbonfactor	25
Labeloffset	0
Lowdiameter	0
Contrast	±0%
Print Defines:	
Printspeed	100mm/sec.

Reading the Current Setup

Theprinter’ scurrentsetupvaluescanbereadfromtheprinter’ sdisplay windowbybrowsingthroughtheSetupMode.

Youcanlisttheprinter’ scurrentsetupvaluesbyprintingtestlabel “Setup Info” intheSetupModeorbyusingIntermecShell.

Thecurrentsetupvaluescanbesenttothehostviathestandardserial communicationchannelusinga SETUP WRITE "uart1:"state-ment(see*IntermecFingerprintv8.xx,Programmer’ sReferenceManual*).

Setup Parameters

Serial Communication

Theserialcommunicationparameterscontrolthecommunication betweentheprinterandtheconnectedcomputerorotherdevicesonthe standardserialport"uart1:"andtheoptionalserialports"uart2:"and "uart3:".Theoptionalportsrequireanoptionalinterfaceboard.The printer ’ s fi rmwaredetectsifaninterfaceboardisinstalledintheprinter andpresentsadditionalsetsofcommunicationsetupmenusdepending ontypeofcommunication(refertodiagrams3-5inChapter7,“Setup Mode”).

Note: Theserialcommunicationparametershavenoeffecton parallelorEasyLANcommunications,orontheINandOUT portsontheoptionalIndustrialInterfaceBoard.

Fortheserialcommunicationchannel"uart1:",thefollowingparameters canbeset.Makesuretheymatchthesetupoftheconnecteddeviceor viceversa.Ifthesetupoftheprinterandthesetupofthehostdonot match,theresponsefromtheprintertohostwillbegarbled.

Baud Rate

Thebaudrateisthetransmissionspeedinbitspersecond.Thereare10 options:

-
-
-
-
-
-
-
-
-
-

Character Length

The character length specifies the number of bits that will define a character. Eight bits are recommended, because that option allows more special characters and characters specific for foreign languages to be used. Refer to the *Intermec Fingerprint v8.xx, Programmer's Reference Manual* for more information.

- 7
- 8

Parity

The parity decides how the firmware will check for transmission errors. There are five options:

-
-
-
-
-

Stop Bits

The number of stop bits specifies how many bits will define the end of a character. There are two options:

- 1
- 2

Flow Control

RTS/CTS is a protocol where the communication is controlled by current through separate lines in the cable being set either to high or low. By default, this option is disabled.

RTS high indicates that the transmitting unit is able to receive characters. RTS low indicates that the receive buffer is filled to 75% (see XON/XOFF).

CTS high indicates that the unit transmitting the CTS signal is ready to receive data. CTS low indicates that the receive buffer is full (see XON/XOFF). In some computer programs, for example MS Windows Terminal, RTS/CTS is designated "Hardware."

ENQ/ACK is a protocol where the communication is controlled by the control characters ENQ (ASCII 05 dec.) and ACK (ASCII 06 dec.) being transmitted on the same line as the data. The sending unit transmits ENQ at regular intervals. If the response ACK is not received, the

transmissionisheldupawaitinganACKcharacterfromthereceiving unit.Bydefault,ENQ/ACKisdisabled.

XON/XOFFisaprotocolwherethecommunicationiscontrolledby thecontrolcharactersXON(ASCII17dec.)andXOFF(ASCII19dec.) beingtransmittedonthesamelineasthedata.XON/XOFFcanbe enabled/disabledseparatelyfordatareceivedfromthehostbytheprinte r (printersendsXON/XOFF)andfordatatransmittedtothehostfrom theprinter(hostsendsXON/XOFF).

XOFFissentfromtheprinterwhenitsreceivebufferis**fi**lledto75%, andthetransmissionfromthehostisheld,waitingforanXONcharac- ter.Whenenoughdatahavebeenprocessedsothereceivebufferis**fi**lled onlyto50%,theprintersendsanXONcharacterandthehostresumes transmittingdata.ThesameprinciplesapplytoXON/XOFFsentbythe host,evenifthepercentage**fi**guremaydiffer.Bydefault,XON/XOFFis disabledfordatainbothdirections.

New Line

Selectsthecharacter(s)transmittedfromtheprintertospecifytheswit ch- ingtoanewline.Therearethreeoptions:

- CR/LF
- LF
- CR

Receive Buff er

Thereceivebufferstorestheinputdatabeforeprocessing.Defaultsizei s 1024bytes.

Transmit Buff er

Thetransmitbufferstorestheoutputdatatobetransmittedbeforetrans- mission.Defaultsizeis1024bytes.

Feedadjust

TheFeedadjustpartoftheSetupModecontrolshowmuchofthemedia isfedoutorpulledbackbeforeand/oraftertheactualprinting.These settingsareglobalandwillbeeffectedregardlessofwhichprogramis run.

> **Note:** Thefirmwareusesthefrontedgesoflabelsw.gaps,the endsofdetectionslots,andtheforwardedgesofblackmarks fordetection,allseeninrelationtothefeeddirection.

Start Adjust

TheStartAdjustvalueisgivenasapositiveornegativenumberofdots. Defaultvalueis0,whichplacestheoriginacertaindistancebackfrom theforwardedgeofthecopy.

- A**positive**startadjustmentmeansthatthespecifiedlengthofmedia willbefedoutbeforetheprintingstarts.Thus,theoriginismoved furtherbackfromtheforwardedgeofthecopy.
- A**negative**startadjustmentmeansthatthespecifiedlengthofmedia willbepulledbackbeforetheprintingstarts.Thus,theoriginis movedtowardstheforwardedgeofthecopy.

Stop Adjust

TheStopAdjustvalueisgivenasapositiveornegativenumberofdots. Defaultvalueis0,whichstopsthemediafeedinapositionsuitablefor tearoffoperation.

- A**positive**stopadjustmentmeansthatthenormalmediafeedafter theprintingiscompletedwillbeincreasedbythespecifiedvalue.
- A**negative**stopadjustmentmeansthatthenormalmediafeedafter theprintingiscompletedwillbedecreasedbythespecifiedvalue.

Recommended Feed Adjustments

Thefollowingsettingsallowprintingfromthetopofthelabel.Minor deviationsfromtherecommendedvaluesmayberequiredduetovarious combinationsofmediatypes,rollsize,typeofmediasupplydevice,and individualdifferencesbetweenprinters.

Adjustment type
Tear-Off (Straight-through) Startadjust:-100dots Stopadjust:0dots
Peel-Off (Self-strip) Startadjust:-56dots Stopadjust:-44dots
Cut between labels Startadjust:0dots Stopadjust:+160dots
Cut between labels and print from leading edge of next label Startadjust:-250dots-369dots31.25 Stopadjust:+160dots+236dots20.0
Cut variable length strip (No liner allowed!) Startadjust:-250dots-369dots Stopadjust:+275dots+406dots

Media

Themediaparameterstellthefirmwarethecharacteristicsofthemedia thatwillbeused,sotheprintoutwillbepositionedcorrectlyandgetthe bestqualitypossible.

Media Size

Thesizeoftheprintableareaisdefinedbythreeparameters;X-Start, Width,andLength.

X-Start

Specifiesthepositionoftheoriginalongthedotsontheprinthead.

ThedefaultX-startvaluepreventsprintingoutsidelabelswhentheliner isslightlywiderthanthelabels.Ifyouwanttomaximizetheprintwidth, resettheX-startvalueto0.

ByincreasingthevaluefortheX-startparameter,theoriginwillbe movedoutwards,awayfromtheinneredgeofthemediapath.Inother words,thelargerX-startvalue,thewiderinnermarginandthelessavail- ableprintwidth.

Width

Specifiesthewidthoftheprintableareainnumberofdotsfromthe origin.Thus,thesumoftheX-startandwidthvaluesgivestheouter marginoftheprintablearea.Thewidthshouldbesettopreventprinting outsidethemedia,whichmayharmtheprinthead.

Length

Specifiesthelengthoftheprintableareainnumberofdotsfromthe originalongtheY-coordinateandallocatesmemoryspacefortwoidenti- calimagebuffersintheprinter’stemporarymemory.

Thesizeofeachbuffercanbecalculatedusingthisformula:

Buffer size (bits) = [Print length in dots] x [Printhead width in dots]

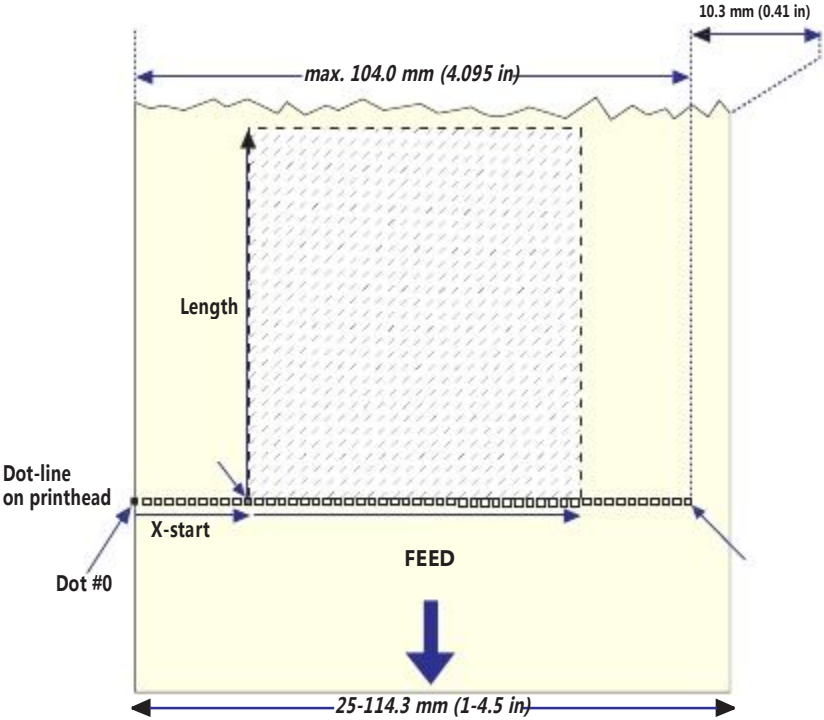
> **Note:** Thetemporarymemoryhasotherfunctionsthatalso requiresomememoryspace.Toobtainalongerprintarea,the memorycanbeincreasedbyfittingalargerSDRAMSIMMon theprinter’sCPUboardasdescribedintheServiceManual.

- Thelengthsetupalsodecidestheamountofmediafeedwhenusing “fixlengthstrip.”

- The length setup creates an emergency stop, which works when the printer is setup for "Label (wgaps)", "Ticket (wmark)", or "Ticket (wgaps)." If the label stop sensor (LSS) has not detected a gap or mark within 150% of the set length, the media feed is automatically stopped to avoid feeding out a whole roll of media, because of an LSS malfunction.

By setting up the X-start, the Width, and the Length, you will create a print window inside which the printing can be performed. Any objector field extending outside the print window in any direction will either be clipped or cause an error condition (Error 1003 "Field out of label"), see *Intermec Fingerprint v8.xx, Programmer's Reference Manual*.

Print Window (8 dots/mm standard printhead)



Intermec offers a number of non-standard thermal printheads, see Chapter 8.

Media Type

The Media Type parameters control how the labels top sensor (LSS) and the media feed work. There are five media type options:

- **Label (wgaps)** is used for adhesive labels mounted on liner.
- **Ticket (wmark)** is used for labels, tickets, or continuous stock provided with black marks at the back.
- **Ticket (wgaps)** is used for tickets and tags with detections lits.
- **Fixlengthstrip** is used for continuous stock where the length of the print window decides the length of media to be fed out.
- **Varlengthstrip** is used for continuous stock. The size of the print image decides the length of each copy.

It is important to select the correct media type, so the printer can indicate the following errors.

- Error 1005 “Out of paper” indicates that the last ordered copy could not be printed because of an empty media stock.
- Error 1031 “Next label not found” indicates that the last ordered label or ticket was successfully printed, but no more labels/tickets can be printed because of an empty media stock.

Paper Type

ThePaperTypeparameterscontroltheheatemittedfromtheprinthead tothedirectthermalmediaor,optionally,thetransferribboninorderto producethedotsthatmakeuptheprintoutimage.

Labels,tickets,tags,strip,andribbonsforvarioustypesofapplicatio

n

areavailablefromIntermec.Forthebestprintoutqualityandmaximum lifeoftheprinthead,useIntermecsupplies.Setuprecommendations forIntermecsuppliesofferedinEuropeandNorthAmericaarelistedin AppendixD.

Asageneralrule,highenergyand/orhighprintspeedwillshortenthe lifeoftheprinthead.Neverusehigherpapertypeandprintspeedset-tingsthannecessaryforobtaininganacceptableprintoutqualityand throughputspeed.

Iftheambienttemperatureislowerthan+15° C(+59° F),decreasethe printspeedby50mm/sec.

Startbychoosingbetweentwoalternatives:

- DirectThermalprinting
- ThermalTransferprinting

Yourchoicewilldecidewhichparameterstoenternext:

Direct Thermal Printing

- LabelConstant
- LabelFactor

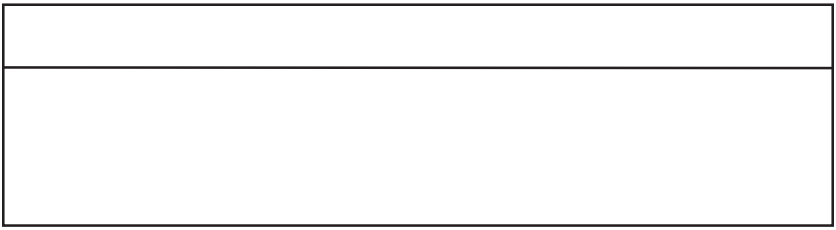
Whenadjustingtheimagedarknessfornon-Intermecdirectthermal media,settheLabelFactortotherecommendedvalueforthetypeof directthermalmedia.SettheLabelConstanttothevaluelistedbelow anddecreaseorincreaseitforlighterordarkerimagesrespectivelyunti l

youaresatisfiedwiththeprintoutquality.

General Paper Type Settings Guide (Direct Thermal)

Sensitivity[1]				
Low				
Standard				
High				
Ultrahigh	60	40	200	150

1



Thermal Transfer Printing

-
-
-
-
-

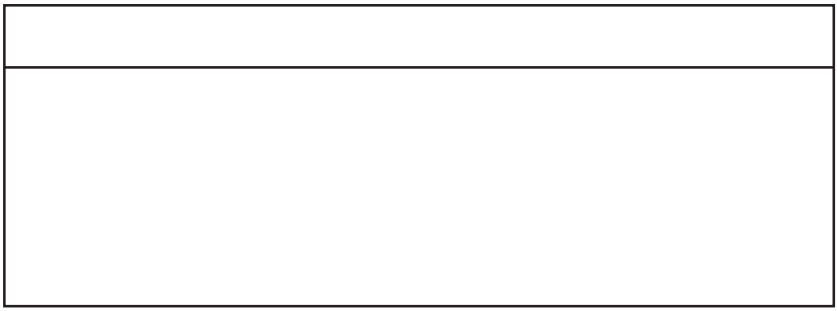
Whenadjustingtheimagedarknessfornon-Intermecmediaandtransfer ribbons,settheRibbonFactortotherecommendedvalueforthetype ofthermaltransferribbon.SettheRibbonConstantatthevaluelisted belowanddecreaseorincreaseitforlighterordarkerimagesrespectively untilyouaresatisfiedwiththeprintoutquality.TheLabelOffsetparam-eterispresentlynotused,sokeepitatthedefaultvalue0.

General Paper Type Settings Guide (Thermal Transfer)

Type
Wax(Europe)
Wax(U.S.A.)
Wax/Resin(Europe)
Wax/Resin(U.S.A.)
Resin(Europe)
Resin(U.S.A.)

TheRibbonSensorparameterisread-only.WhenperformingaTestfeed orwhenpressingthe<Enter>keywhentheRibbonSensormenuisdis-played,theprinterwillfeedoutsomemediaandautoadjustthesensor. Theresultingsettingisdisplayedinthemenu.

TheLowDiameterparameterspecifiesthediameteroftheribbonsupply roll,whereSYSVAR(26)switchesfrom0to1.SYSVAR(26)=0means thatthereisstillasufficientsupplyofribbon,whereasSYSVAR(26) =1meansthatitistimetoconsiderreplacingtheribbonsupply.The diameterisexpressedinmillimetres(1mm=0.04in.)andanaccuracy of±3mmcanbeexpected.Notethatthissettinghaslittleeffectunless SYSVAR(26)isreadbyaFingerprintprogram.However,Error1083 “RibbonLow”isreportedateverytenthprintingoperation.Bydefault, thelowdiameteris0,thatis,theribbonlowfunctionisdisabled.



Contrast

Use the contrast parameter to make minor adjustments of the blackness in the printout, for example to adapt the printer to variations in quality between different batches of the same media. 11 options are displayed in an endless loop from -10% to +10%. Default value is 0%. The contrast is reset to the default (±0) whenever a new paper type is specified, regardless which method has been used.

Testfeed

The sensitivity of the label stop sensor (LSS) may need to be adjusted when switching from one type of media to another. This is especially the case when using adhesive labels since the transparency of the liner (backing paper) may vary. When the Testfeed menu is displayed, press the <Enter> key. A number of blank copies will be fed out until the firmware has decided the proper setting for the LSS. At the same time, the front edges of the labels, tickets, etc. are detected so the feed control can position the media according to the Feed adjust parameter (same as the Intermec Fingerprint statement TESTFEED). Four values used for troubleshooting the LSS are displayed (read-only information).

Print Defines

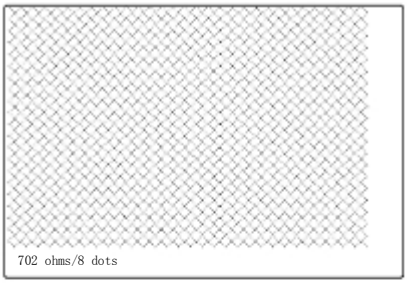
Head Resistance

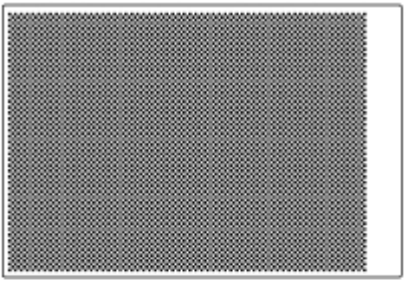
The printhead resistance is measured automatically at startup (read-only information).

Testprint

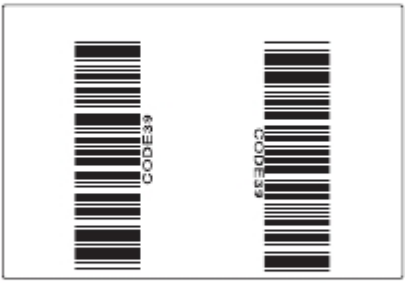
The test labels "Diamonds", "Chess", "BarCodes#1", and "BarCodes #2" are used to check the printout quality and facilitate adjustment of the printhead pressure, see Chapter 12. The test labels "SetupInfo" and "HardwareInfo" list the printer's current setup and the installed electronic devices. Test label "NetworkInfo" is only printed if the printer has an optional EasyLAN interface board. If the information does not fit on one label, two or more labels will be printed. If the printer refuses to print a test label, press the <i> key to find out what is wrong, for example "printhead lifted" or "out-of paper". See next page for examples of test labels.

Test Labels





Diamonds



Bar Codes #1

Setup Info

Print Speed

The print speed is variable between 100 and 200 mm/sec. for printers fitted with an 8 dots/mm (203.2 dpi) printhead and between 100 and 150 mm/sec. for printers with an optional 11.81 dots/mm (300 dpi) printhead. Generally, the lower the speed, the better the print out quality. This is especially true when printing barcodes with the bars running across the media path (“ladder style”), when printing on demanding face materials, and when printing at low ambient temperatures. The default setting is 100 mm/sec. (approximately 4 inches/sec.).

The combination of a large media roll (>152 mm/6 inches diameter) and/or narrow media width in combination with high print speed (>150 mm/6 inches per sec.) could cause jerks in the media feed. Such jerks will compress text and spoil the readability of ladder-style barcodes placed close to the front edge of the label. In case of batch printing, only the first label in the batch will be affected. Negative start adjust values tend to increase the jerks.

- If the media roll is larger than 152 mm (6 inches), do not use a print speed >150 mm/sec.
- If a negative start adjust is used, do not use a print speed >125 mm/sec.
- Narrow media width may require further restrictions on print speed.
- Avoid placing text and ladder-style barcodes close to the front edge of labels.

LSS Test

The function on the label stop sensor (LSS) can be tested automatically or manually as decribed in Chapter 12 “Adjustments.”

LTS (Label Taken Sensor)

The sensitivity of the LTS can be tested and adjusted as described in Chapter 12 “Adjustments.”

Returning to Factory Default Setup

Therearetwowaystoreturnthefactorydefaultsetupoftheprinter:

AInsertaspecialCompactFlashmemorycardandrestarttheprinter.

BUsingtheprinter’sbuilt-inkeyboard.

Toresettheprinterusingthekeyboard,dolikethis:

1Liftthepprinthead.

2Switchonthepowertotheprinterandpressthe<i/F5>keyandwait untiltheprinterbeeps.

3Swiftlypressthefollowingkeys:
</F4>

4Thefollowingmessagewillbedisplayed:

```
Factory Default?
Enter=Yes ESC=No
```

5Within10seconds,press<Enter>toresettheprintertofactory default.Theparameterswillberesetandtheprinterwillcontinuethe normalstartup.

Ifyoupress<Esc/F2>orwaituntilthe10secondstimeouthaspassed, thenormalstartupwillcontinuewithoutanyresetbeingperformed.

> **Note:**Ifanyofthefiles"card:NOSHELL.CFG", rom:NOSHELL.CFG",or"c:NOSHELL.CFG"existsinthe printer’smemory,noresettofactorydefaultwillbeperformed.
>
> Thefactorydefaultwillremoveallfilesusedtostoresettings. Itwillnotresetsettingsthatalreadyhasbeenreadwhenthe filesareremoved.ThismeansthatEasyLANWirelesssettings (SSID,keys,etc.)willretaintheirvaluesfromtheprevious start.However,thenextrebootwillresetthemtofactory default.

7 Setup Mode

Thischapterdescribeshowtoenterthesetupmode atinstallation,explainshowtonavigateinthesetup mode,andprovidesoverviewsoverwhichparameters andmessagesareavailableforthestandardprinterand withvariousinterfaceboards.

Entering Setup Mode at Installation

ThemethodofenteringtheSetupModedependsonwhichstartupfiles arestoredintheprinter’ smemory,asubjectthatwasmorethoroughly discussedinChapter3,“StartingUp.”

EasyCoder PF4i Compact Industrial with Intermec Shell

- Switchonthepower.
- Whenthedisplayshowsthemessage“Enter=Shell;xsec...”,press <Enter>.
- Press<Setup>(thisfacilitycanbeusedanywherewithinIntermec Shell).
- Setuptheprinterasdescribedinthischapter.
- ReturntoIntermecShellbypressing<Setup>.

EasyCoder PF4i Compact Industrial with a custom-made application program

- Normally,thereisnoneedtoentertheSetupModeforcustom-made applicationprograms.Necessaryprovisionsforchangingthesetup, manuallyorautomatically,shouldbeprovidedbytheprogram.

Navigating in Setup Mode

Whilegoingthroughthesetupprocedure,youareguidedbytextsinthe printer’sdisplay.Youcannavigatebetweensetupmenus,acknowledge displayedvalues,selectortypenewvalues,etc.byusingthekeysonthe printer’skeyboard.

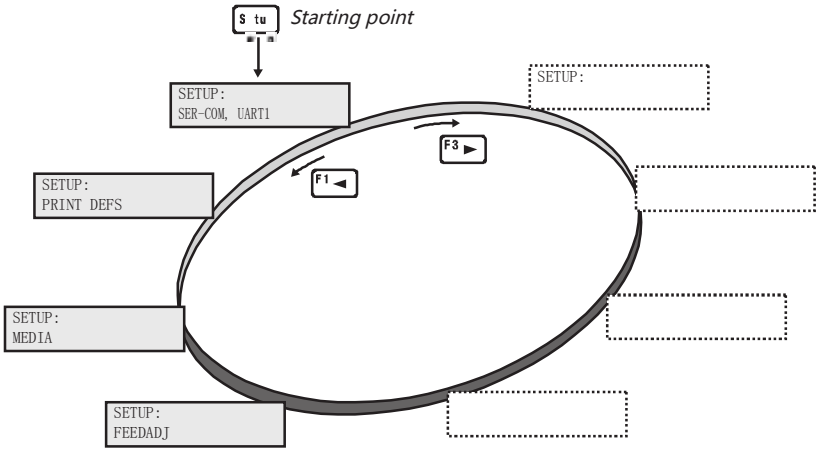
Note: AnexternalkeyboardcannotbeusedinsidetheSetup Mode.

Moveonemenutoth eleftonthesamel	
	Moveuponelevel.[1]
	Moveonemenutotherightonthesamelevelorscrollforw ard
	Movedownonelevel.[1]
	Displayerrormessagesattestlabelprintingfailure.
—	Enternumericvalues.
	Specifynegativevalues(leadingposition).
	Cleardisplayedvalues.
	Acknowledgeandmovetonextmenuorperformtestfeedsi n
	ExittheSetupMode.CanbeusedanywhereinSetupMode.

[1]. “Left”, “right”, “up”, and “down” refertotheoverviewslaterinthischapter.

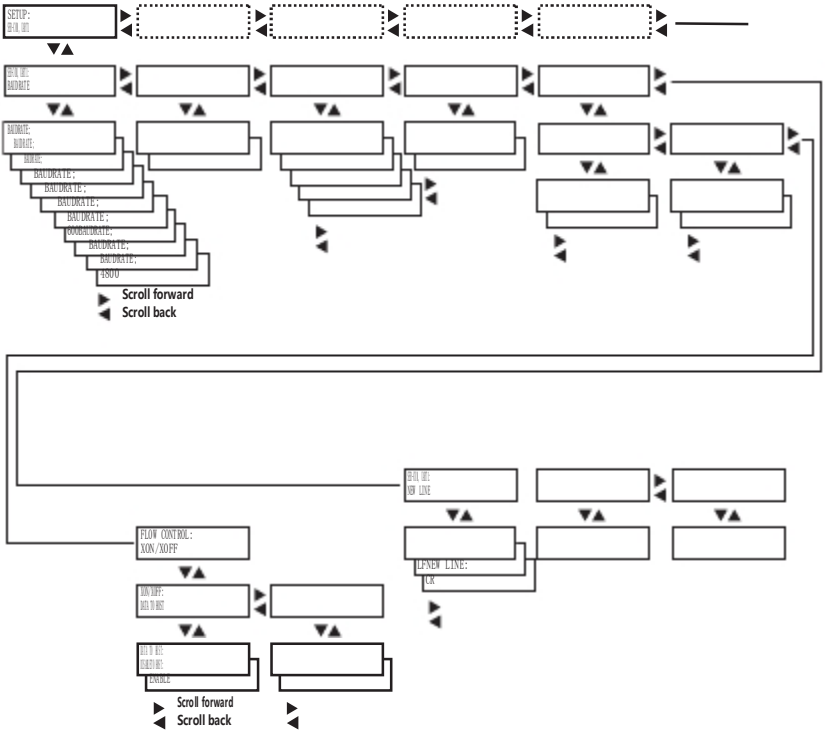
TheSetupModeisorganizedasanendlessloop,fromwhichyoucan selectanumberofsub-categories.Atstartup,thefirmwaredetermines ifoptionssuchasalabeltakensensor,acutter,oraninterfaceboardis installedintheprinter.Onlyinstalledoptionsareshownin theSetup Mode.

Thediagrambelowshowstheoptionsinthemainloop.Detailedover-viewsareshownonthepagesthatfollow.



Setup Mode; Serial Communication "uart1:"

(Intermec Fingerprint v8.20)



Legend:

Dottedboxesandlinesindicateoptions.

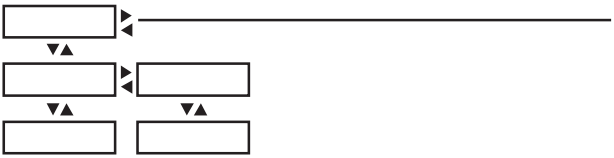
Thickboxesindicatesdefaultoptions.

Valuesinsidebracketsindicatedefaultsettings.

Setup Mode; Feed Adjust

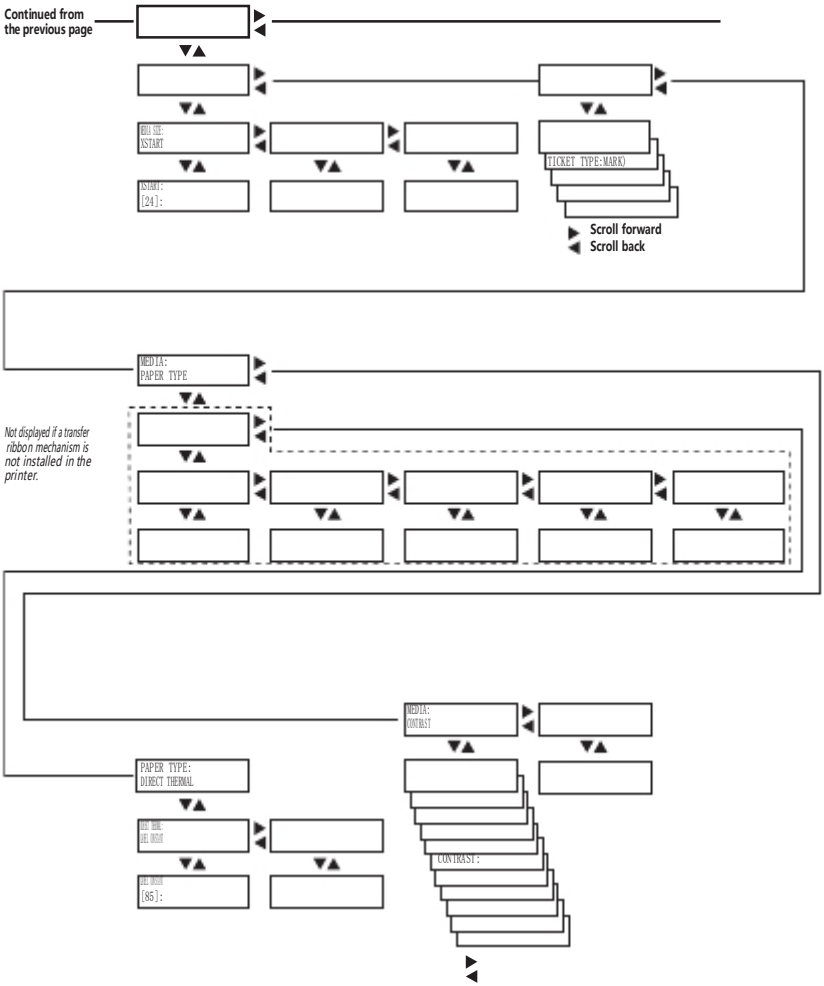
(Intermec Fingerprint v8.20)

Continued from the previous page



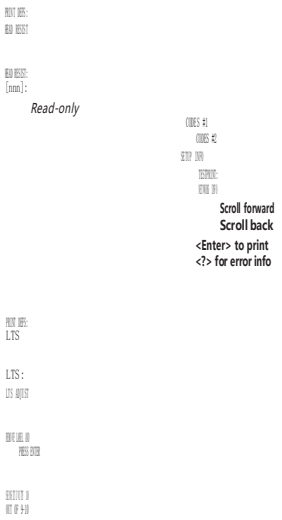
Setup Mode; Media

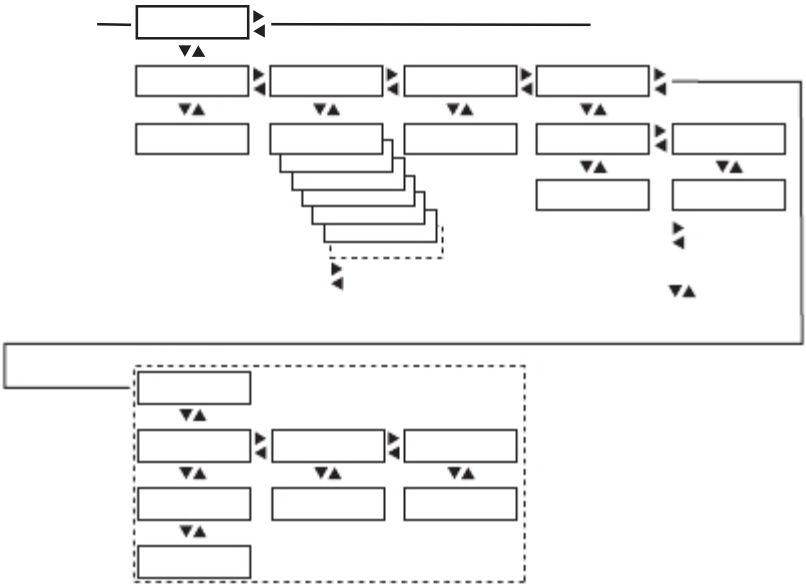
(Intermec Fingerprint v8.20)



Setup Mode; Print Defs
(Intermec Fingerprint v8.20)

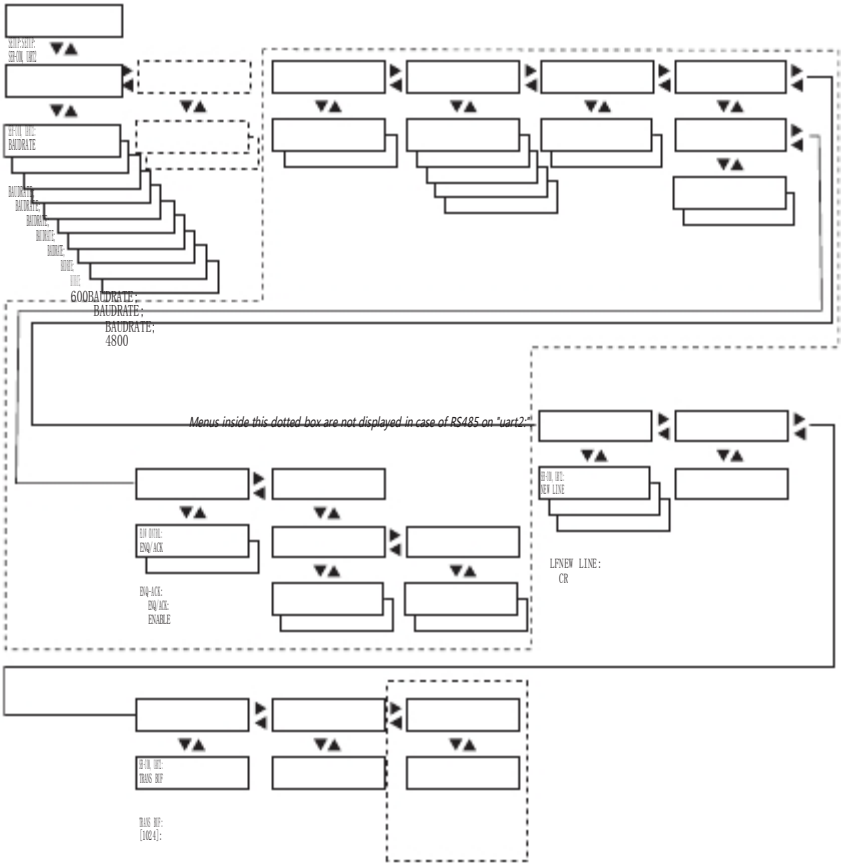
Continued from the previous page





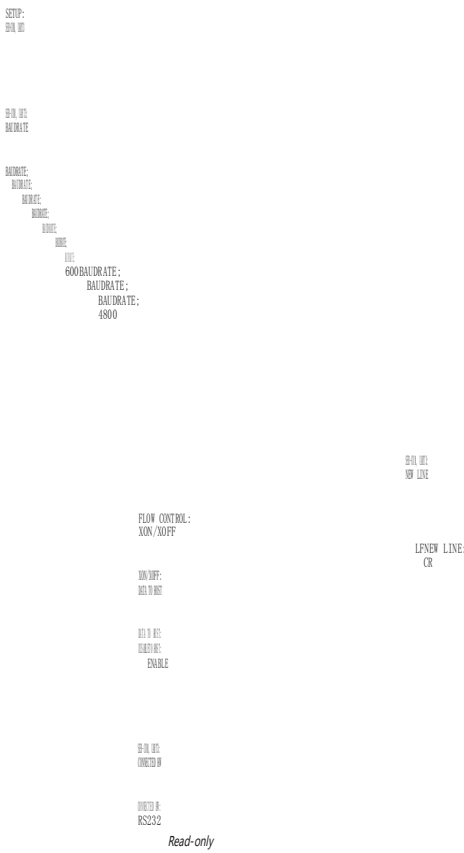
Setup Mode; Serial Communication "uart2:" (option)

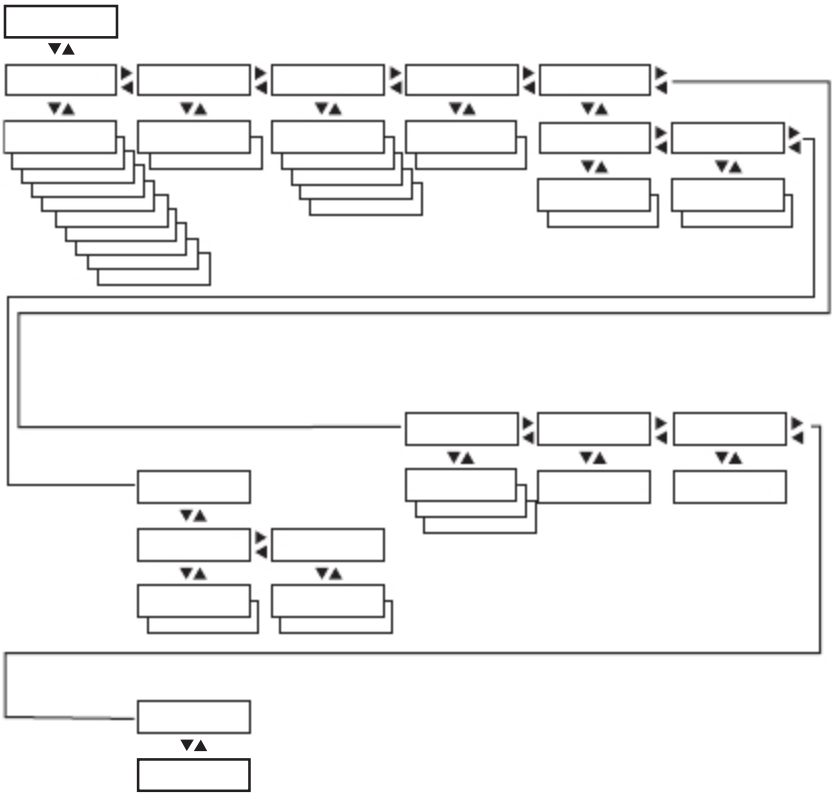
(Intermec Fingerprint v8.20)



Setup Mode; Serial Communication "uart3:" (option)

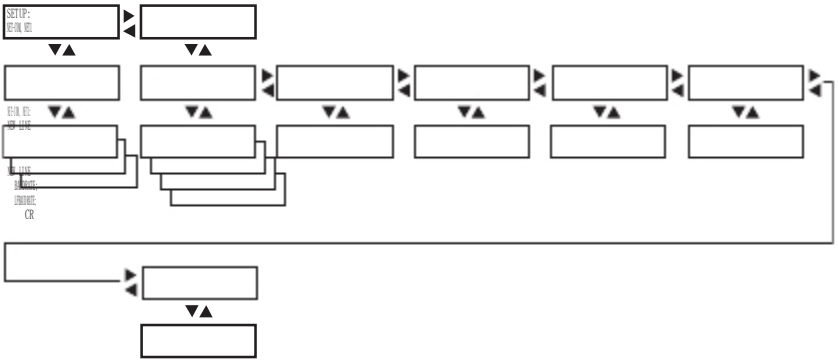
(Intermec Fingerprint v8.20)





Setup Mode; Network Communication "net1:" (option)

(Intermec Fingerprint v8.20)



8 Intermec Shell Startup Program

ThischapterdescribestheIntermecShellstartup programandcoversthefollowingtopics:

- Introduction
- StartingwithIntermecShell
- IntermecShellOverview
- LineAnalyzer

Introduction

IntermecShellisastartupprogram,whichisaprogramthatautomatically startsrunningwhentheprinterisswitchedon.IntermecShellhelps theoperatortochoosebetweenanumberofstandardorcustom-made applicationprogramsandtostartcertainusefulfacilities,aslistedbelow.

Application Programs

- IntermecFingerprint(forcreatingyourownprogramsortorunthe IntermecInterDriver)
- IntermecDirectProtocol(easy-to-useslaveprotocol)
- LINE_AXP.PRG(lineanalyzerprogram)
- Otherapplicationprogramsintheprinter’ smemory.

  AprerequisiteforaprogramtoappearasanoptioninIntermecShell isthattheprogramisprovidedwiththeextension “.PRG” andis storedintherootofthedirectory"/c"or"card1:".However,some originalIntermecutilityprogramsareexcludedaslongastheyremain storedin"/rom":

PRG
SHELLXP.PRG
WINXP.PRG

Intermec EasyCoder PF4i Compact Industrial—User′s Guide (Fingerprint)

Other Facilities

- SetupMode(manualsetupfromprinter’ skeyboard)
- PrintSetup(printingsetuponlabel)
- Testfeed(formfeedsandauto-adjustoftheLSS)
- TestLabel(printingoftestlabels)
- Defaultsetup(resettingallsetupparameterstodefault)
- SoftwareUpdate(downloadingdatafromahosttoaCompactFlash cardintheprinter,upgradingtheprinter’ sfirmwarefromaCompact-Flashcard,orupgradingtheprinter’ sfirmwarefromafileinaPC)
- Reboot(restartingtheprinter)

Note:IntermecShellisfactory-installedintheprinter’ spermanentmemory(device″/rom″).Ifyouinsertamemorycard withanotherstartupfilebeforeyouswitchontheprinter,orif thereisastartupfilestoredintheprinter’ spermanentmemory (device″/c″),thisstartupfilewillbeusedinsteadofIntermec Shell(seeChapter3,“StartupFiles”).

Starting with Intermec Shell

Afewsecondsafteryouhaveswitchedonthepowertotheprinterand theinitializationiscompleted,thecountdownmenuoftheIntermec Shellprogramwillbedisplayed:

```
ENTER=SHELL
5 sec.  v.8.1
```

Nowyouhave5secondstoenterIntermecShellbypressing<Enter>.

Thelowerlinetellsyouhowmuchtimeyouhaveleft.Shouldthetime runoutbeforeyouhavetakenanyaction,thelastselectedapplication inIntermecShellwillbeopened.Ifyouusethesameapplicationallthe time,youwillonlyneedtoswitchonthepower,oncetheapplicationhas beenselected.

Ifnootherapplicationhasyetbeenselected,thecurrentversionof IntermecFingerprintwillbeopenedwith"auto"selectedasstdI/O channel(seeIntermecFingerprintmanuals).Whenthecountdownis completed,youwillseetheselinesinthedisplay:

```
Fingerprint
8.20
```

Ifyouwanttoselectanotherapplication,justcyclethepowerandenter IntermecShellbeforethecountdowniscompleted.

WhenyouentertheIntermecShellfromthecountdownmenus,the SelectApplicationmenuwillbedisplayed:

```
SHELL
SEL.  APPLICATION
```

Inthismenu,youcanchoosebetweentwooptions:

- Press<Enter>togotomenuswhereyoucanselectanapplication program.
- Press<>togototheFacilitiespartofIntermecShell.

Selecting an Application

In Intermec Shell, the menus present the options in infinite loops, To see all menus and options, refer to the overview in this chapter. The Select application lets you choose an application program that resides in the printer's memory:

- **Current appl.** starts the last selected application (by default Intermec Fingerprint with "auto" selected as standard I/O channel).
- **Fingerprint** is used to create, modify, or run programs written in the Intermec Fingerprint programming language and to run the Intermec InterDriver. This option requires that you also select a standard IN/OUT channel, which is the channel you want to use for communication between the printer and the computer. Normally, you select "uart1:". Refer to the Intermec Fingerprint manuals.
- **DirectProtocol** is an easy-to-use printer protocol for downloading label formats and variable input data to a printer from a host computer. This option requires that you also select a standard IN/OUT channel, that is the serial channel you want to use for communication between the printer and the host. Normally, you select "uart1:". Refer to the *IntermecDirectProtocol v8.xx, Programmer's Reference Manual*.
- **LINE-AXP.PRG** (Line Analyzer) is a Fingerprint program that captures characters received by the printer on a communication channel and prints them on labels. (See later in this chapter.)
- Other Application Programs will presented as additional options.

Note: When an application program is started, it may automatically change the communication setup. If another application is selected later, this communication setup will remain valid, unless the new application includes instructions that automatically change the setup. The setup could also be changed manually in the Setup Mode.

Selecting Other Facilities

As an alternative to selecting an application, you can step through a number of other useful facilities:

Setup

Setup the printer using its built-in keyboard, see Chapter 7, "Setup Mode."

Print Setup

Produce a printout of the printer's current setup values (test label "Setup Info").

Testfeed

Feed out an number of label, ticket, tag, or portions of continuous stock while the printer auto-adjusts its media feed and label stop/black mark sensor. It is recommended to perform a Testfeed each time you load a roll of labels from a new batch or a different brand.

Test Label

Print a series of four test labels (test labels "Diamonds", "Chess", "Bar Codes #1", and "BarCodes #2") in order to test the printout quality and print head alignment. The labels are presented in an infinite loop, so you can print the series over and over again. Press <Enter> for each new label.

Default Setup

Reset all setup parameters to their default values, as listed in Chapter 6, "Setting Up the Printer."

Software Update

Using the Zmodem communication tool, files can be downloaded from a PC, either to be stored on a standard CompactFlash memory card or to upgrade the printer's firmware. The following options are available:

- Update CompactFlash card allows the printer to be used as a CompactFlash card programming device. Any files can be downloaded from a PC to a standard CompactFlash card inserted in the memory card slot in the printer's rear plate.

  A typical application is to create a firmware upgrade card from an upgrade file stored in a PC. You can use the card to upgrade the firmware in several printers simply by moving the card from printer to printer. Just insert the card, switch on the power, and wait from the prompts to appear in the printer's display window.

- Update firmware is used to directly upgrade the firmware of a specific printer from a new firmware version stored as a file in a PC. If the printer is equipped with an EasyLAN Ethernet or Wireless board, the user must have access rights to upgrade the firmware, see the EasyLAN User's Guide.

If the CompactFlash card or upgrade file contains an earlier firmware version than the one in the printer, the printer's firmware will be downgraded without warning.

Firmware upgrade files can be found on www.intermec.com or be obtained from your local Intermec distributor.

Reboot

Corresponds to cycling the power to the printer. To exit Intermec Shell without having selected any application, select Reboot. Then wait for the 5 seconds countdown to finish, and the last selected application will be opened.

Intermec Shell v8.1 Overview

POWER ON

ENTER=SHELL
in

ENTER=SHELL
in

ENTER=SHELL
in

Last selected application is started

Default:
Fingerprint 8.20 w. std I/O = "auto"

is fitted.

centronics:

STD I/O CHANNEL

Legend:

Return to previous menu.

Proceed to next menu.

Accept displayed option and proceed, or execute displayed option.

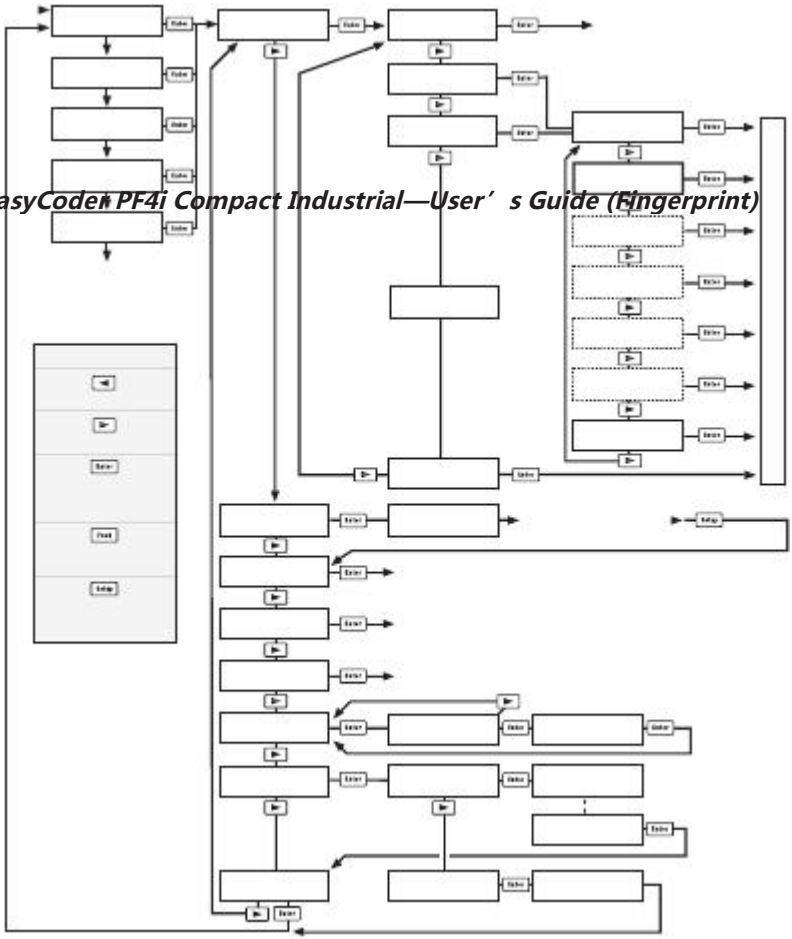
Perform a Testfeed anywhere in Intermec Shell.

Enter the Setup Mode from anywhere in Intermec Shell.

SHELL

SHELL

SHELL



Line Analyzer

TheLineAnalyzer(LINE_AXP.PRG)isaprogramwritteninthe IntermecFingerprintprogramminglanguageandisintendedtohelp solvingpossiblecommunicationproblems.Asthenameimplies,theLine Analyzercapturesallincomingcharactersonaspecifiedcommunication channelandprintsthemononeormorelabels.

Printablecharactersareprintedinblack-on-white,whereascontrol charactersandspacecharacters(ASCII000 - 032dec)areprintedin white-on-black.

Whiletheprinterisreceivingdata,the "Ready" controllampblinks. Thereisa0.5secondtimeout.Thatis,ifnomorecharactershavebeen receivedafter0.5second,theprogramconsidersthetransmissionterminatedandprintsoutalabel.

Aslongasacontinuousstringofcharactersisbeingreceived,theprogramwrapsthelinesuntilthelabelisfullandthenstartstoprintanother label.Atthebottomofeachlabel,thefollowinginformationisprinted:

- Pagenumber
- Numberofcharactersprintedonthelabel
- Totalnumberofcharactersreceivedsofar

TheLineAnalyzerisdisplayedastheoption "LINE_AXP.PRG"under the "SEL.APPLICATION" menu.AftertheLineAnalyzerhasbeen selectedandtheprinterhasstartedupagain,theprinterfeedsouttwo labelsandthefollowingmenuisdisplayed:

```
Line Analyzer
Sel.port(1-6) 1
```

Enterthedesiredcommunicationportusingthenumerickeysonthe printer' skeyboard:

1="uart1:"
2="uart2:"
3="uart3:"
4="centronics:"
5="net1:"
6="usb1:"

If the printer is not fitted with the specified port, an error message appears in the display and you can select another port:

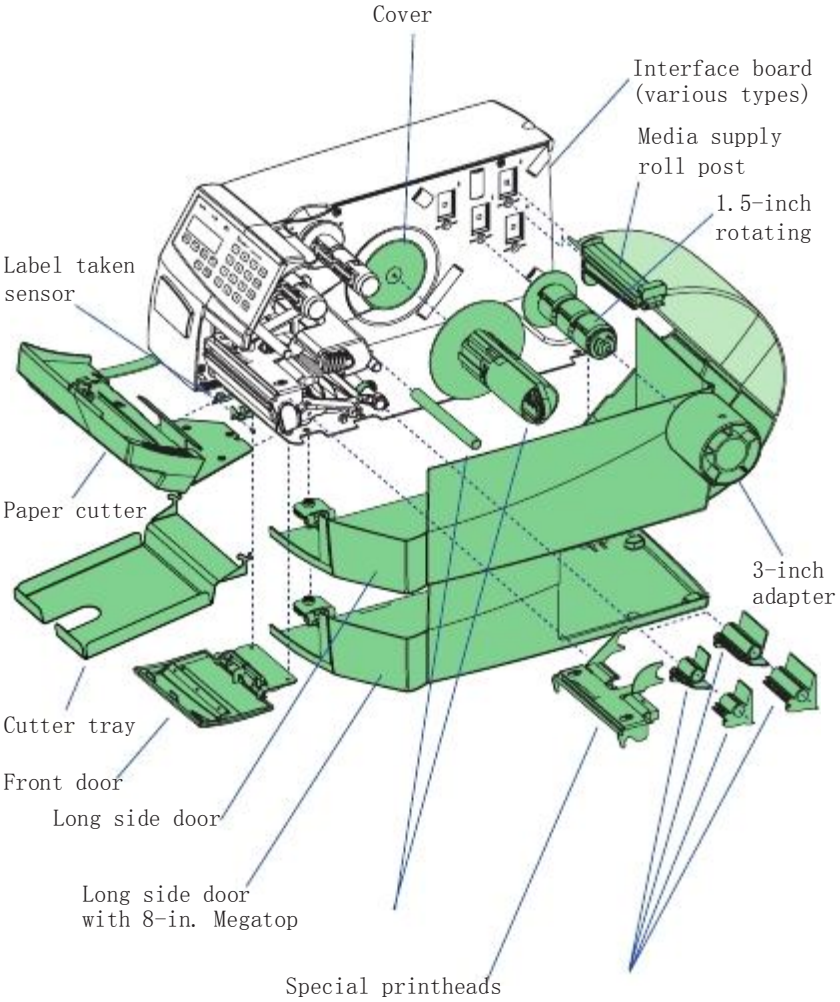
```
Line Analyzer
Error:56
```

9 Options

This chapter describes the options available for the EasyCoder PF4i Compact Industrial printer. The options can be factory installed, field-installed by an authorized service technician, or in some cases installed by the operator.

Introduction

TheEasyCoderPF4iCompactIndustrialprovidesahighdegreeofflex-ibilitybecauseithasamodulardesign.Byaddingoptionstothebasic printer,theEasyCoderPF4iCompactIndustrialcanbeadaptedfora varietyofapplications.Mostoptionscaneasilybeinstalledbytheopera-tor,howeverafewshouldbeinstalledbyanauthorizedservicetechnician orareonlyavailableasfactory-installedoptions.



Side Doors and Megatop

TheEasyCoderPF4iCompactIndustrialcomeswithtwotypesofside door.Thestandardlongdoorenclosestheentiremediacompartment andallowsamediarollwithadiameterof152mm(6inches).Italsohas aslotforexternalmediasupply.The8-inchMegatophasahingedtrans-parentcanopythatenclosesamediarollwithadiameterofupto213 mm(8.38inches).Thestandardlongsidedoorisgenerallyillustrated throughoutthismanual.

Paper Cutter

Thepapercutterisafactory-orfield-installableoptiondesignedtocut offcontinuouspaper-basedstockorlinerbetweenlabels.Thecut-off labels,tickets,ortagscanbecollectedonanoptionaltray.Thepaper cuttercanbecontrolledusingtheinstructionsCUT,CUTON,and CUTOFFinIntermecFingerprintandtheIntermecDirectProtocol. AlsoseeChapter4,"MediaLoad,Cut-Off."

Integral Liner Takeup Unit

Theintegrallinertakeupunitisanoptionaldeviceforpeel-off(self-st

rip)
operation,whichmeansthelabelsareseparatedfromaliner(back-ingpaper)afterprintingandthelineriswoundupon ananinternalhub. Theunitalsoincludesaguideshaft.Peel-offcannotbecombinedwith Quick-Loadguides,seebelow.

Media Supply Hub

Therotatingmediasupplyhubisdesignedtofitmediarollcoreswith aninternaldiameterof38-40mm(1.5inch).Thehubcanbefittedin thesamepositionsasthesupplyrollpost,seeChapter2.Beingfactory installed,thepositionofthemediasupplyhubisnotintendedtobe changedbytheoperator.

3-inch Adapter

The3-inch/76mmadapterisusedwitharotatingmediasupplyhuband makesitpossibletousemediarollswith3inch/76mminnerdiameter cores.Theadapterispressedontothehubandsecuredbyascrew.Not usedwithamediasupplyrollpost.

Label Taken Sensor

TheLabelTakenSensor(LTS)isaphotoelectricsensorthatenablesthe printer’ sfirmwaretodetectifthelatestprintedlabel,ticket,tag,etc.has beenremovedbeforeprintinganothercopy.TheLTScanbeenabledor disabledusingtheinstructionsLTS&ONandLTS&OFFrespectively inIntermecFingerprintandtheIntermecDirectProtocol.

TheLTScannotbeusedinconnectionwithapapercutter.

Real Time Clock

TheRealTimeClockcircuit(RTC)relievestheoperatororthehost fromhavingtosettheclock/calendarusingtheIntermecFingerprint instructionsDATE$andTIME$aftereachpowerup.TheRTChasits ownbackupbatterybackupthatwilllast10yearsormore.

CompactFlash Protection Plate

TheprotectionplateenclosesaninsertedCompactFlashcardandmakes itmorediffículttosteal.SeeChapter3forillustration.

Special Printheads

Asstandard,theprinterisfittedwithan8dots/mm(203.2dots/inch) thermalprinthead.Thereareal soanumberofoptionalprintheadsfor specialapplications:

8 dots/mm (203.2 dots per inch)

11.81 dots/mm (300 dots per inch)

Theprintheadcaneasilybereplacedorexchangedbytheoperatoras describedinChapter11.

Media Thickness	Standard/Opti
Max175μm(7mils)	Standard
170-220μm(6.6-8.7mils	Option

Media Thickness	Standard/Opti
Max175μm(7mils)	Option
170-220μm(6.6-8.7mils	Option

Interface Boards

Anumberofinterfaceboardsareavailableforusewiththe EasyCoder PF4iCompactIndustrial.Theinterfaceboardsareeitherfactory-fitted orcaneasilybefittedbyanauthorizedservicetechnician.

TheEasyCoderPF4iCompactIndustrialcanaccommodateone EasyLANinterfaceboardplusoneotherinterfaceboard.

EasyLANboards:

- EasyLANEthernetinterface
- EasyLANWirelessinterface

Othercommunicationboards:

- ParallelInterfaceBoard(IEEE1284)
- DoubleSerialInterfaceBoard
- Serial/IndustrialInterfaceBoard

10 Troubleshooting

ThischapterdescribeshowtheIntermecReadiness Indicatorswork.Italsolistsvariouspossiblecasesof inferiorprintoutquality,describespossiblecauses, and
suggestsremedies.

Guide (Fingerprint)

Intermec Readiness Indicator

Thereadinessoftheprinter,individuallyorasapartofasolution,is indicatedbytheblueIntermecReadinessIndicator(IRI).

IftheIRIblinksorisswitchedoff,theprinterisnotready.Furtherinformationcanbeobtainedinthedisplaywindowbypressingthe<F5/i> key.Incaseofseveralerrorsorsimilarconditionsoccuringsimultaneously,onlythemostsignificanterrorisdisplayed.Oncethiserrorhas beencleared,nextremainingerrorisdisplayed.

Theprinterwillalsoreturnerrormessagestothehost,providedthere isaworkingtwo-waycommunication.Refertothe*IntermecFingerprint v8.xx,Programmer'sReferenceManual*.

Providedtheprinterisconnectedtoanetwork,allconditionsthatpreventsprintingarereportedtotheEasyADCConsole.TheEasyADC ConsoleisaPC-basedsoftwarewhichallowsasupervisortomonitorall connecteddevicesthathaveanIntermecReadinessIndicator,including handheldcomputers,accesspoints,andprinters.

Display Messages and LED Indications

Error/Event	IRI	Error	Comment
Operational	On	0	Noerror
Outofpaper	Blin	1005	
Nextlabelnotfound	Blin	1031	
Labelnottaken	Blin		
Outoftransferribbon	Blin	1027	
Transferribbonisins	Blin	1058	
Headlifted	Blin	1022	
Cutterdoesnotrespon	Blin	1059	
Cuttererror1	Blin	1701	
Cuttererror2	Blin	1702	
Cuttererror3	Blin	1703	
Cutteropen	Blin	1704	
Lsstoohigh	Blin	1007	
Lsstoolow	Blin	1008	
Testfeednotdone	Blin	1606	
PauseModeentered	Blin		
SetupModeentered	Blin k		Includinginteractivesetup from
IPlinkerror	Blin		Seenote1,2,and3
IPconfigurationerror	Blin		Seenote1,3,and4
GenericDPerror	Blin		Seenote5
Pressanykeytocontin	Blin		Seenote6
Applicationloaderro	Blin		Seenote7
IRIblinkbyapplicati on	Blin k		SetbyFingerprintinstructi on
IRIoffbyapplication	Off		SetbyFingerprintinstructi on
Applicationbreak	Off		Seenote8
Printheadnotfound	Off		
Rebooted	Off		
Inizializing	Off		Setatstartupuntiloperatio

Note1: This is only applicable for printers equipped with an EasyLAN interface.

Note2: A printer that is equipped with an EasyLAN interface, but is not connected to a network, will have a blinking IRI. To avoid this, the user can set "IPSELECTION" to "MANUAL" and "IPADDRESS" to "0.0.0.0". This will indicate that the user does not regard the lack of network connection as an error.

Note3: No trap can be sent when this error/event occurs.

Note4: This error indicates that the printer has not received an IP address. It is only applicable for printers with IPSELECTION set to DHCP and/or BOOTP.

Note5: In the Direct Protocol, the user can enable error handling for specific errors using the ERROR statement. When errors added to the built-in error handling occur, this event will be set. The text included in the snmptrap is the standard text corresponding to the error.

Note6: If an error occurs in the Fingerprint immediate mode, for example "out of paper" when the print key is pressed, this event will be set.

Note7: If an application is started but does not execute, the IRI will blink. This will occur for example if there is a syntax error in the loaded program file.

This is useful when a printer has an AUTOEXEC.BAT file (startup file) that is supposed to run automatically.

Note8: When execution is stopped with user break (SHIFT+PAUSE) or due to a run-time error, the IRI shall be off. It will be set to on if the user changes mode to Direct Protocol or runs an application.

If, however, the application program handles the user break (ONBREAK) or the run-time error (ONERROR GOTO), the IRI will not be affected. In this case, it is up to the application to set the status.

Note9: At most, but not all, printer crashes, the console is reset. This will make the IRI go off.

Printercrash	Off		Seenote3and9
Printerturnedoff	Off		
Maintenance	Off		Setwhenupgrading
PowersupplyOvertem-perature	Off	1718	

Symptom	Possible	Remedy	Refer to
Overallweakprint-out	WrongPaperTypeparameter Contrastvaluetoolow Printheadpressuretoolow Wornprinthead	Changeparameter Changeparameter Adjust	Chapter6 Chapter6 Chapter12 Chapter11 CallService
Printoutweakeron	Unevenprinthead	Adjustarmalign-	Chapter12
Weakspots	Foreignparticlesonmedia Media/ribbondon’tmatch Poormediaorribbonquality	Cleanorreplace Changetomatching media Selectabetterbrand	Chapters4&5 Chapter6 Chapter6 Chapter11 CallServi
Overalldarkprint-out	WrongPaperTypeparameter Contrastvaluetoohigh Printheadpressuretoohigh	Changeparameter Changeparameter Adjust	Chapter6 Chapter6 Chapter12 CallServi
Excessivebleeding	WrongPaperType Contrastvaluetoohigh Printheadpressuretoohigh	Changeparameter Changeparameter Adjust	Chapter6 Chapter6 Chapter12 CallServi
Darklinesalongmediapath	Foreignobjectson	Cleanprinthead	Chapter11

Whiteverticall ines	Printheaddirty Missingprinthe ad	Cleanprinthead Replaceprinthe ad	Chapter11 Chapter11
Largepartofdot line missing	WrongX-startor Widthparameter Failingprinthe ad	Changeparamete r Replaceprinthe	Chapter6 Chapter11 CallServi
Printoutmissin g alonginneredge	Badmediaalign- ment Smallcore&supp ly postinupperpos.	Adjust Moveposttolowe r pos.	Chapter4 Chapter2 Chapter6
Transferribbon breaks	Ribbonnotfitted correctly Wrongpapertype parameter Badenergycontr	Reloadribbon Changeparamete r,	Chapter5 Chapter6 CallServi
Transferribbon wrinkles	Faultyribbonbr eak shaftadjustmen t Incorrectedgeg uide	Adjust Adjust Adjust	Chapter12 Chapter4 Chapter12
Nothermaltrans fer	Ink-coatedside does	Reloadribbon	Chapter5
Mediafeednot workingproperl y	Changedmedia characteristic s Wrongstart-and stopadjustvalu es WrongMediaType parameter WrongLSSpositi on	PerformaTEST-FEED Check/change Check/change Check/change Cleanmediaguid es	Chapter4 Chapter6 Chapter6 Chapter12 Chapter11 CallServi
Compressedtext or barcode	Toohighprint speedforlarge mediaroll	Lowerprintspee d	Chapter6

11 Maintenance

Thischapterdescribeshowtheoperatorcanmaintain theprinter.Regularmaintenanceisimportantforthe printoutqualityandforthelifeoftheprinthead.The chaptercoversthefollowingtopics:

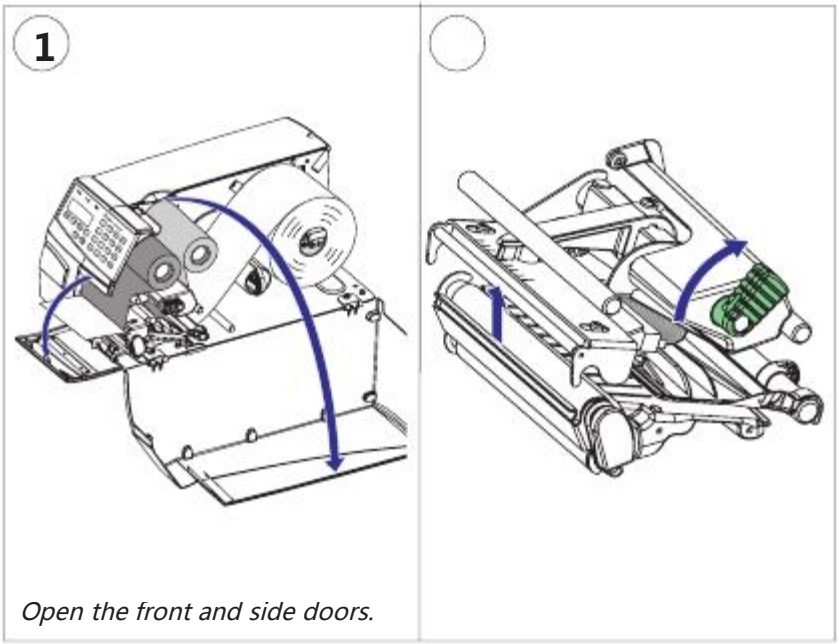
- Printheadcleaning
- Externalcleaning
- Cleaningthemediaguides
- Printheadreplacement
- Mediajams

Whencleaningorreplacingthe printhead,takeampleprecautionsto avoidelectrostaticdischarges.

Printhead Cleaning

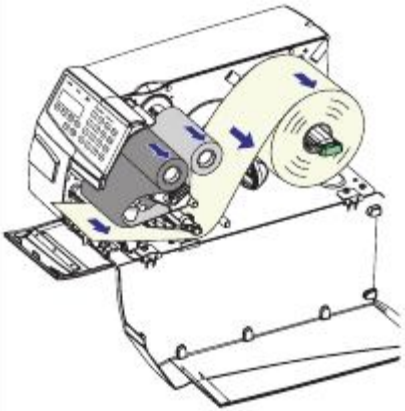
Cleaningtheprintheadonaregularbasisisimportantforthelifeofthe printheadandfortheprintoutquality.Youshouldcleantheprinthead eachtimeyoureplacethemedia.Thissectiondescribeshowtoclean theprintheadusingcleaningcards.Ifadditionalcleaningisrequired,for exampleremovingadhesiveresiduefromtheplatenrollerortearbar,use acottonswabmoistenedwithisopropylalcohol.

Isopropylalcohol[$(CH_3)_2CHOH$;CAS67-63-0]isahighly flammable,moderatelytoxic,andmildlyirritatingsubstance.

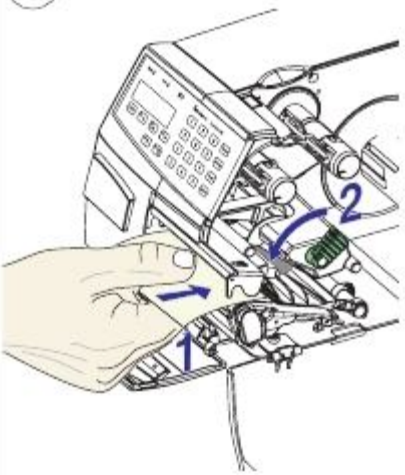


Open the front and side doors.

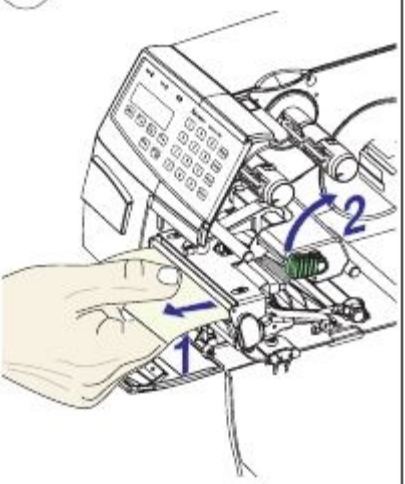
Printhead Cleaning, cont.



Remove any media and transfer ribbon.



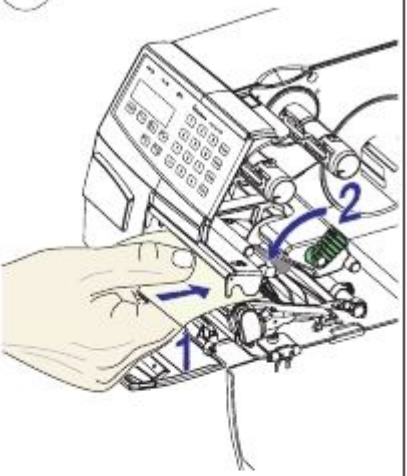
Insert most of the cleaning card under the printhead (1). Engage the printhead (2).



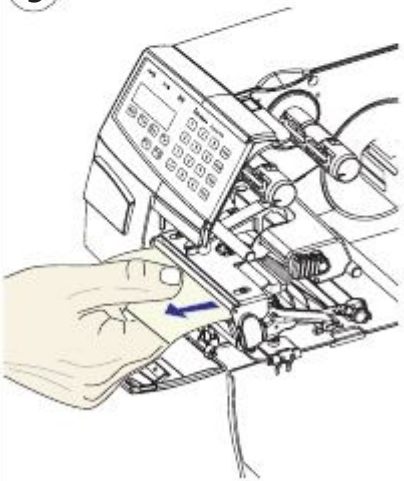
Printhead Cleaning, cont.

7

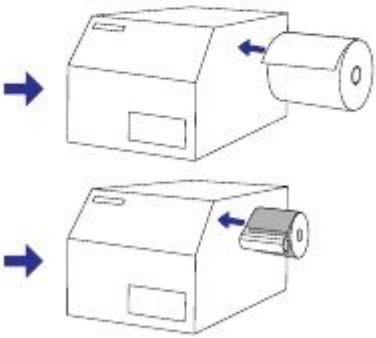
Wait for approx. 30 seconds to allow the cleaning fluid to dissolve the residue.



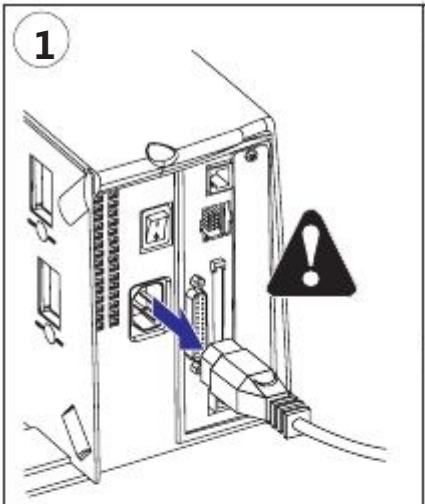
9



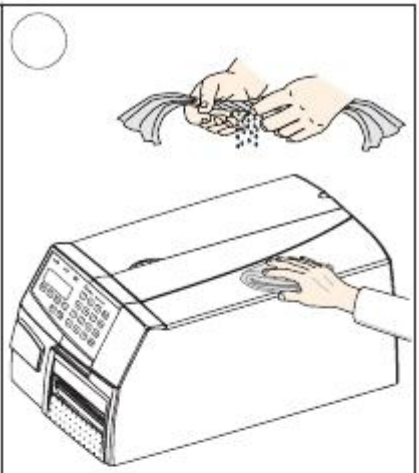
Pull out the cleaning card. If necessary, repeat the process with a fresh cleaning card.

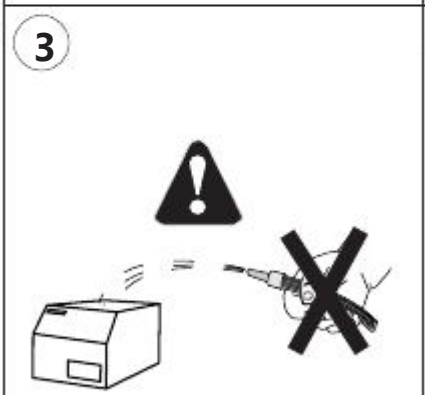


External Cleaning

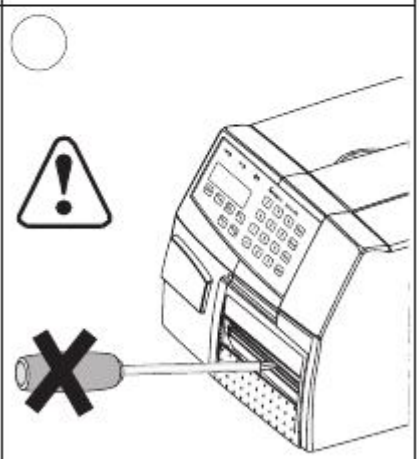


Always remove the power cord before cleaning!





Never spray the printer. Protect it from water when cleaning the premises.

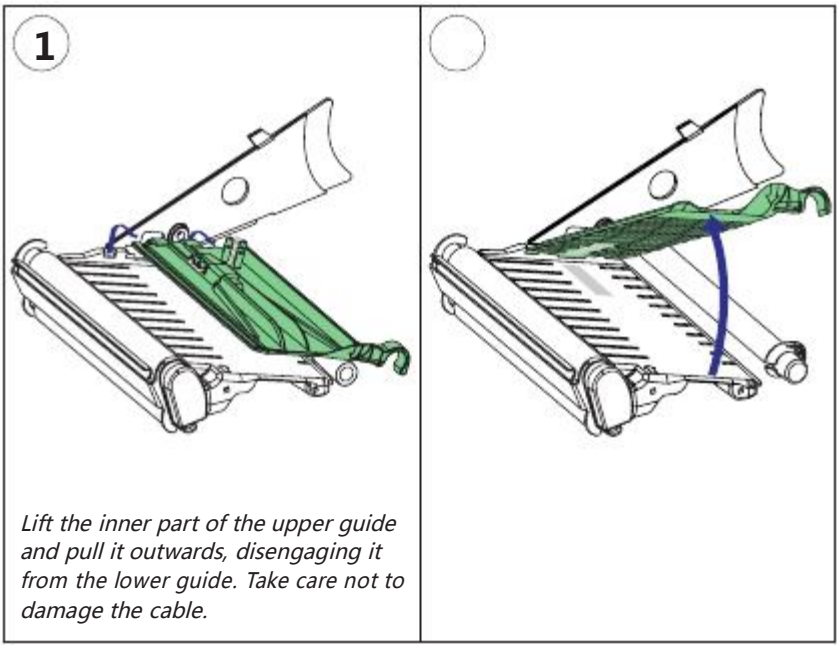


Cleaning the Media Guides

Both parts of the label stop sensor, which controls the media feed, are covered by plastic guides. The guides are transparent to allow the light to pass between the two parts of the label stop sensor. These areas (indicated by a shade of gray in illustration #2 below) must be kept clean from dust, stuck labels, and adhesive residue.

If the printer starts to feed out labels in an unexpected way, raise the upper guide as described below and check for any object that may block the beam of light (dust, stuck labels, adhesive residue, etc.). If necessary, clean the guides using a cleaning card or a soft cloth soaked with isopropyl alcohol. Do not use any other type of chemical. Be careful not to scratch the guides.

Isopropyl alcohol [$(CH_3)_2CHOH$; CAS 67-63-0] is a highly flammable, moderately toxic, and mildly irritating substance.



Lift the inner part of the upper guide and pull it outwards, disengaging it from the lower guide. Take care not to damage the cable.

Printhead Replacement

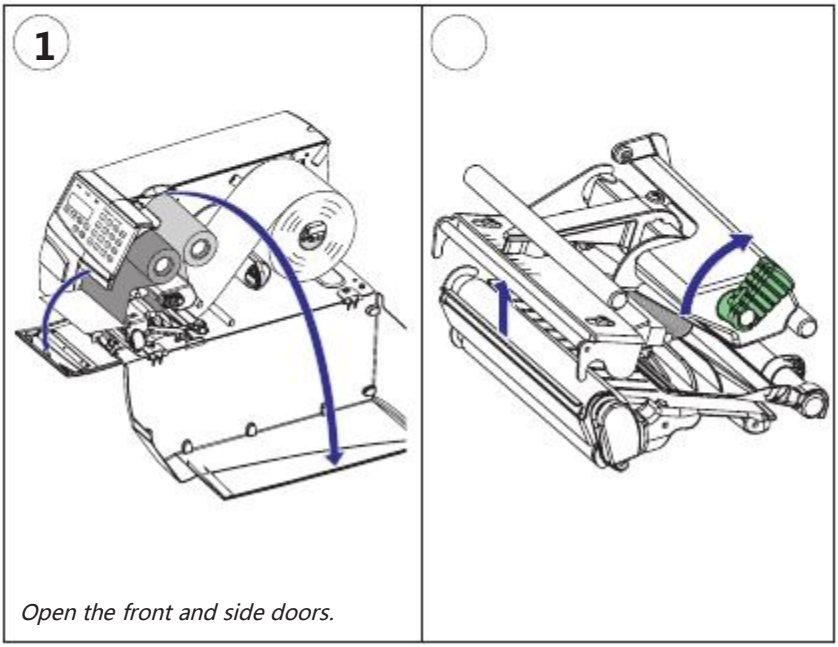
Theprintheadissubjecttowearbothfromthedirectthermalmediaor ribbonandfromtherapidheatingandcoolingprocessduringprinting. Thus, theprintheadwillrequireperiodicreplacement.

Timebetweenprintheadreplacementsdependsontheprintimages, the typeofdirectthermalmediaorribboninuse, theamountofenergyto theprinthead, theprintspeed, theambienttemperature, andseveral otherfactors.

Caution

Whilereplacingtheprinthead, thepowermustbeoff. The firmwarewillnotdetectthenewprintheadresistanceand densityuntiltheprinterhasbeenrestarted.

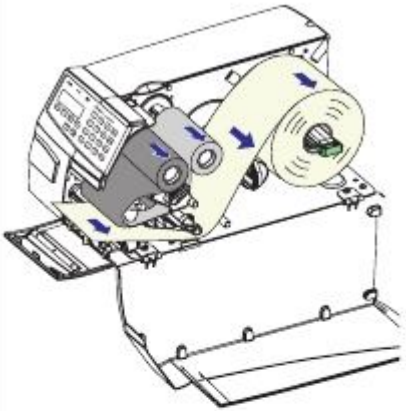
Note: Checkthatthedensityanddotalignmentofthenew printheadmatchestheprintheadyouarereplacing. However, youcanswitchbetweenalignmentsanddensitiesatwill, butbe advisedthattheprintoutwillbeaffectedaccordingly.



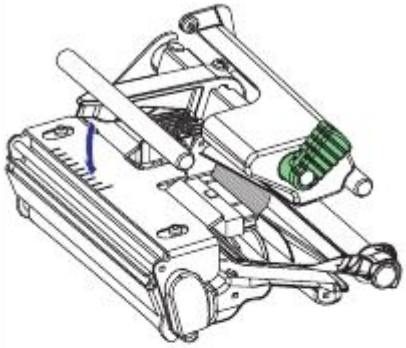
Open the front and side doors.

Printhead Replacement, cont.

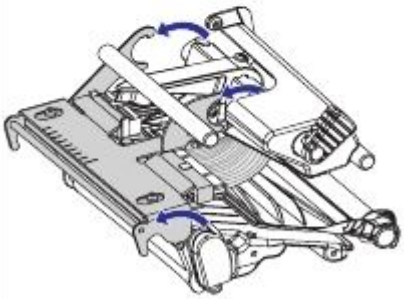
3



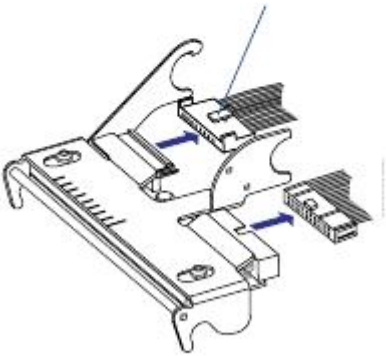
Remove any media and transfer ribbon .



5

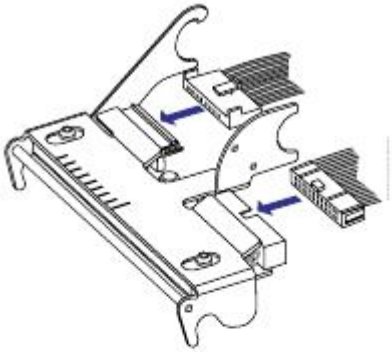


Disconnect the printhead bracket from the print mechanism as indicated by the arrows and pull out the printhead as far as the cables allow.

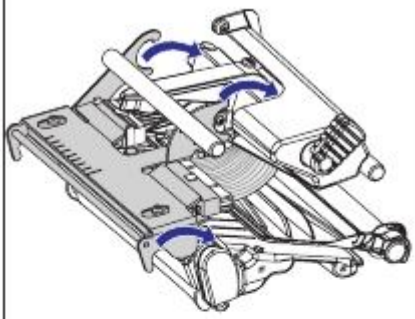


Printhead Replacement, cont.

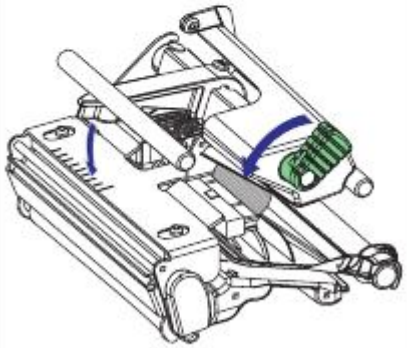
7



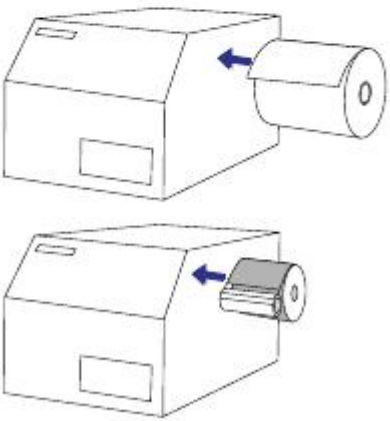
Connect the two cables to the replacement printhead.



9



Turn the printhead lift lever counterclockwise so the magnet engages the printhead bracket.



Media Jams

Shouldamediajamoccurintheprintmechanism,proceedthiswayto clearit:

- Alwaysswitchoffthepowerbeforestartingtoclearthejammed media.
- Raisetheprintheadandpulloutthemedia.
- Ifthemediahasbeenwounduporhasstuckontheplatenroller,carefullyremoveitbyhandwithoutusinganysharptoolsthatcandamage thedelicateplatenrollerorprinthead.Avoidrotatingtheplatenroller.

  Ifyoumustpullawaythemediabyforcecausingtheplaten rollertorotate,itisveryimportantthatthepowerhasbeen offforaminuteormore.Ifnot,theelectronicscanbedamagedbeyondrepair.

- Cutoffanydamagedorwrinkledpart.
- Checkifthereisanyadhesivesomewhereintheprintmechanism, cleanusingacleaningcardorcottonswabsoakedinisopropylalcohol.

  Isopropylalcohol[$(CH_3)_2CHOH$;CAS67-63-0]isa highlyflammable,moderatelytoxic,andmildlyirritating substance.

- ReloadthemediaasdescribedinChapter4.
- Switchonthepower.
- Readjustthemediafeedbypressingthe<Feed>key.

Caution

Warning

12 Adjustments

Thischapterdescribeshowtheoperatorcanadjust theprinter.Thechaptercoversthefollowingtopics:

- Narrowmediaadjustment
- Labelstopsensoradjustment
- Printheadpressureadjustment
- Ribbonbreakshaftadjustment
- Quick-Loadguidesinstallation
- Labeltakensensoradjustment

Narrow Media

Theprinterisfactory-adjustedforfull-sizemediawidth.Whenusing medialessthanfullwidth,itisrecommendedthatyouadjusttheposi-tionofthepressurearmsoitbecomescenteredwiththemedia.Thereby, anevenpressureacrossthemediaisobtained.

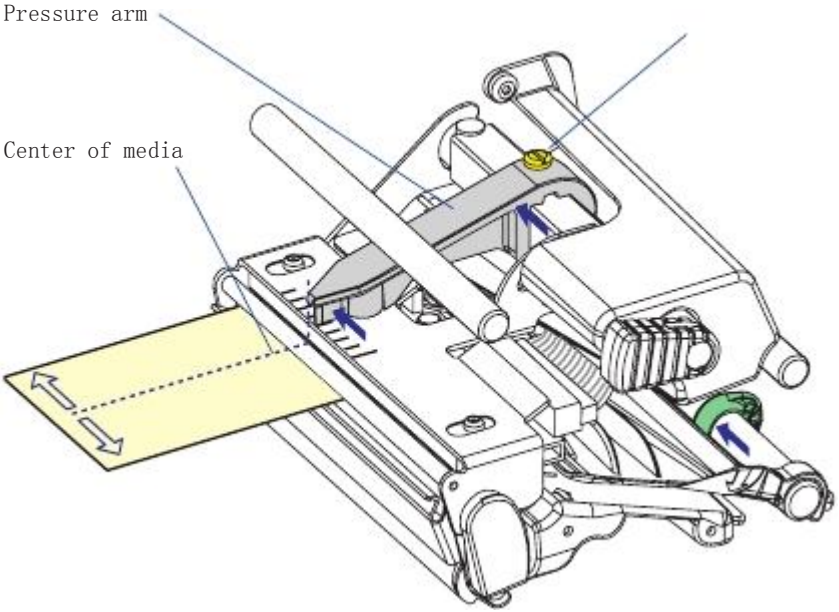
Apoorlyadjustedpressurearmmaybedetectedbyaweakerprintouton eithersideofthemediapath.

Toadjustthepressurearm,proceedasfollows:

- Loosenthestraight-slotscrewthatholdsthepressurearm.Move thearminwardsoroutwardsuntilthearrowonthetipofthearm becomescenteredwiththemedia.

  Whilemovingthearm,pushatthepartwherethescrewissituated, notatthetip.Ifthearmishardtomove,lifttheprintheadandpull theprintheadbracketfreefromthemagnetinthearm.

- Afterhavingcenteredthearm,lockitbytighteningthescrew.



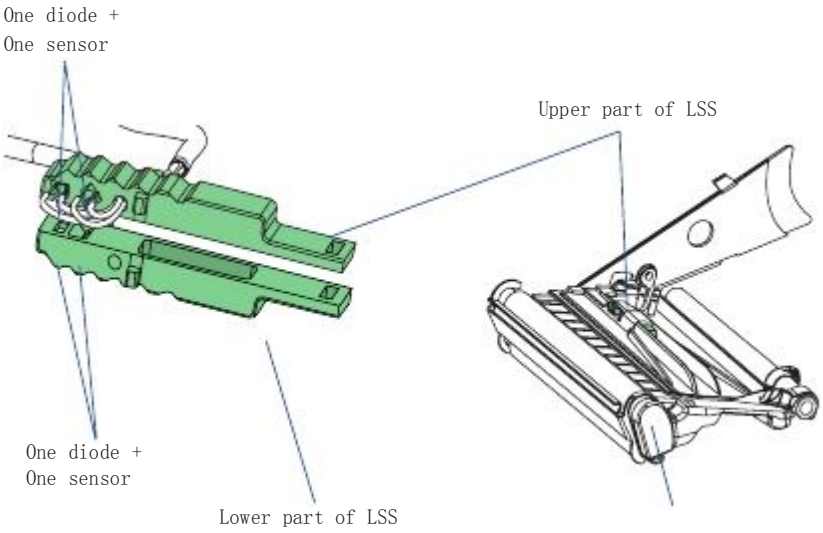
Label Stop Sensor

Thelabelstop/blackmarksensor(LSS)isaphotoelectricsensorthat controlstheprinter’smediafeedbydetectinggapsbetweenlabels,orslots orblackmarksincontinuousstock,dependingontheprinter’ssetup inregardofmediatype(seeChapter6,“SettingUpthePrinter”).An obviousprerequisiteisthattheLSSmustbealignedwiththegaps,slots, orblackmarks.Ifusing-irregularlyshapedlabels,aligntheLSSwiththe fronttipsofthelabels.

TheLSScanbemovedlaterallybetween5fixedpositions.Thereisone partofthesensorontopoftheuppermediaguideandanotherpart underneaththelowerguide.Thesemustbeadjustedindividuallytothe sameposition.Usingasmallscrewdriver,pushtheminwardsasfaras theygoandthenpullthemout—oneatthetime—whilecountingthe clicksfromthesnap-locks.Aholeinthebottomplatefacilitatesadjust-mentofthelowersensorpackage.

Thevariousdetectionpointsofthesensorinrelationtotheinneredgeof themediaareasfollows:

Oneclickout
Twoclicksout
Threeclicksout
Fourclicksout
Fiveclicksout



InthePrintDefinespartoftheSetupMode,youhavetwowaystotest thelabelstopsensorifyouhaveadetectionproblem;LSSAutoandLSS Manual.

Themenusonlyprovidesindicationsfromthelabelstopsensorunit. Thetestingmenuscandetermineifthesensorunitisnotphysicallyin position,isblockedbydustorstucklabels,orisdefectiveinsomeway. Furthermore,thisisanaidifmediahasdetectioncomplication.

> **Note:** Thereisnowaytoadjustthe LSS-function;themenus onlyindicatevaluesfromtheLSSobtainedbyperforminga TESTFEEDoperation.

LSSAuto isthequickandnormalwaytodetermineifthelabelstop sensorworksproperlyandisabletodetectgaps,slots,orblackmarks.

LSSManual showstheactualsettingprovidedbythelatestTESTFEED operation.Itisalsopossibletotryothersettings.LSSManualisprimar- ilyintendedforserviceandisnotdescribedinthismanual.

LSS Auto

- Checkthattheprinterissetupforthetypeofmedialoadedinyour printer(SetupMode/Media/Mediatype/LABELS(wGAPS);TICKET (wMARK),TICKET(wGAPS),FIXLENGTHSTRIP;orVAR LENGTHSTRIP.
- PerformaTESTFEEDbysimultaneouslypressingthe<Shift>and <Feed>keysontheprinter' skeyboard.
- Makesurethatthereisalabel—notagapormark—attheLSS.
- Checkthatthemediaisroutedasclosetothecentersectionasthe guidesallow.
- EntertheSetupMode(seeChapter7)andgotoSetupMode/Print Defines/LSSTest/LSSAuto.
- Themenushouldlooklikethiswiththecursorplacedinthecenter:

  LSS Auto

- Gaporslotdetection:
  Lifttheprintheadandpulloutthemediaslowly.WhentheLSS detectsagaporadetectionslot,thecursormovestotheright.

  LSS Auto

- Blackmarkdetection:
  Lifttheprintheadandpulloutthemediaslowly.WhentheLSS detectsablack,thecursormovestotheleft.

  LSS Auto

- Itispossibletorefreshthecenteredcursorpositionbypressingthe </F4>key.
- Ifthecursorbehavesasdescribedabove,theLSSisworkingandis proporlyalignedwiththegaps,slots,orblackmarks.
- Ifthecursordoesnotreactonagap,slot,orblackmark,checkthis:
  - IstheLSSlaterallyalignedwiththeslotsorblackmarks?
  - AreboththeupperandlowerpartoftheLSSalignedwitheach other?
  - Isthetransferribbonproperlyloadedsoitdoesnotinterferewith theLSS?(SeeChapter5.)
  - AretheLSSguidescleanandfreefromstucklabelsorotherobjects thatwillinterferewiththelightthatgoesfromonepartoftheLSS totheother?Ifnot,cleanasdescribedinChapter11.
  - Doesthemediahavesomekindofpreprintthatcandisturbethe detection?
  - Istheretoolittledifferencebetweentheblackmarksandthesur- roundingareas?
  - Doesthelinerhavetoolittletransparency?
  - DoestheLSSworkwithanothertypeofmedia?(Rememberto changetheMediaTypesetupandperformanewTESTFEED.)

Printhead Pressure

The pressure of the thermal printhead against the direct thermal media is factory-adjusted. However, the use of thicker or thinner media than normal could require the printhead pressure to be readjusted.

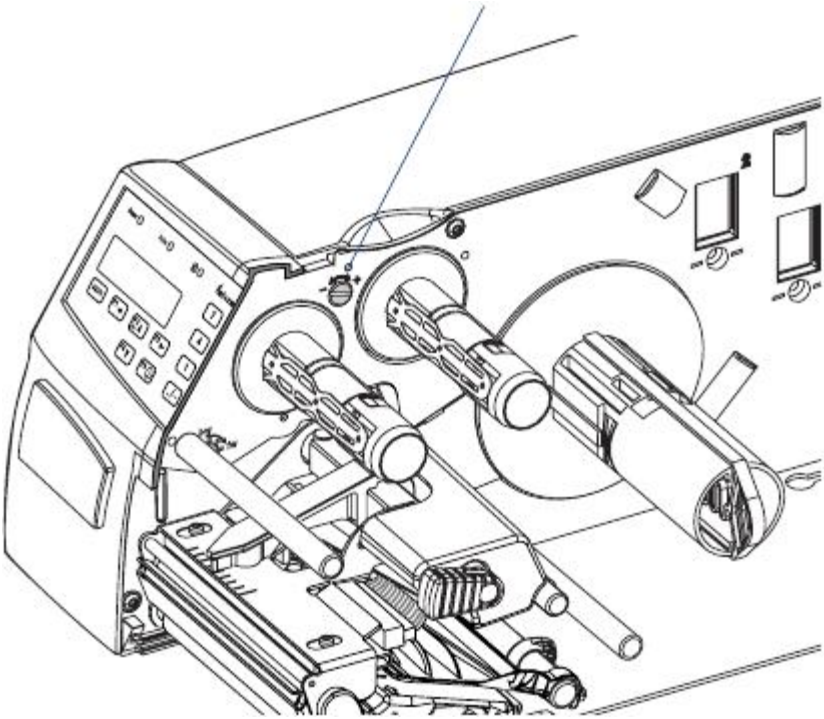
Using a straight-slot screwdriver, turn the adjustment screw clockwise for more pressure (+) or counterclockwise for less pressure (-). Print a few labels, preferably test labels (see Chapter 6, "Setting Up the Printer") and check the printout. Increased pressure generally gives a darker printout and vice versa. Repeat until the desired result is obtained.

To return to the factory setting, tighten the screw (+) as far as it goes and then loosen it (-) four full turns.

Do not use a higher printhead pressure than necessary, because it may increase the wear of the printhead and shorten its life.

Adjustment screw

Caution



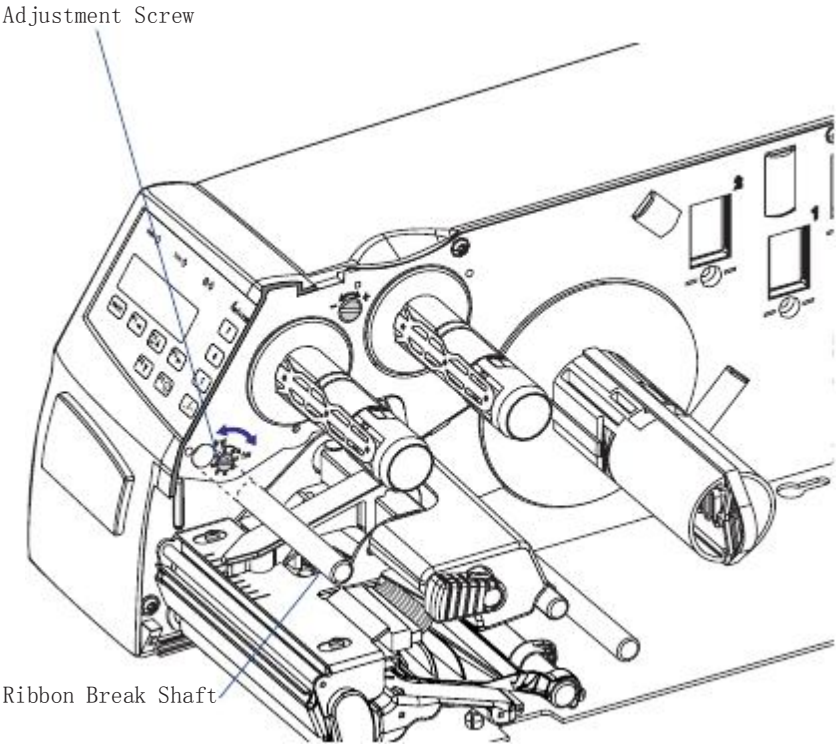
Ribbon Break Shaft

If ribbon wrinkling occurs, you may need to adjust the alignment of the front ribbon break shaft so that it runs parallel to the printhead and the ribbon supply and rewind hubs. The adjustment is done using a straight-slot screw that is located immediately behind the front ribbon break shaft.

- If the ribbon tends to slide outwards, turn the screw carefully clockwise (fw) to move the outer end of the break shaft forward.
- If the ribbon tends to slide inwards, turn the screw carefully counter-clockwise (bw) to move the outer end of the break shaft backward.

Caution

Before readjusting the break shaft, make sure that there is no other cause for the wrinkling of the ribbon. (See Chapter 10, "Troubleshooting.")



LTS (Label Taken Sensor)

The sensitivity of the LTS may need to be adjusted according to ambient light conditions and reflective characteristics of the backside of the media. This is done in the Setup Mode (PrintDefs/LTS), see Chapter 7. You can also check that the LTS works properly.

The LTS setup options are only displayed if an optional label taken sensor is installed in the printer.

LTS Adjust

Press <Enter>. A label is fed out. Remove the label and press <Enter> again. A menu shows the sensitivity automatically selected by the firmware and the range, in which the LTS will work. Press <Enter> again and you will proceed to the LTS Test menu.

LTS Test

Press <Enter>. A label is fed out. Remove the label and a new label should be fed out automatically. Repeat until you are sure the LTS works properly. Then press <Enter> to stop and exit.

LTS Value

Press <Enter>. You can enter a new value in the range indicated in the LTS Adjust menu (see above). Min/max values are in the range 0 to 10.

A Technical Data

Thisappendixliststhetechnicaldatafortheprinter.
PleasenotethatIntermecreservestherighttochange
withoutpriornoticeandthatthisinformationdoes
notrepresentacommitmentonthepartofIntermec.

Printing		
PrintTechnique	DirectThermalandThermalTrans	
PrintheadResolution	8dots/mm(203.2dpi)	Option300dp
PrintSpeed(variable)	100to200mm/sec.(≈4to8in./sec.)	8dots/mm 300dpi
PrintWidth(max)	104mm(4.095inches) 105.7mm(4.161inches)	8dots/mm 300dpi
PrintLength(max)	3276dots-409.5cm(161.25in.)[1]	
MediaWidth(min/max)	25to114.3mm(1to4.5inches)	Standardedge
MediaWidth(min/max)	40/80to114.3mm(1.57/3.15to4.5	Quick-Load guides
MediaRollDiameter (max)	152mm(6.00inches) 213mm(8.38inches)	Longsidedoor
MediaRollCoreDiameter	38to40mm(1.5inches)or76mm (3inches)	
RibbonWidth(min/max	25to110mm(1to4.33inches)	
RibbonRollDiameter (outer)	65mm(2.56inches)equivalentto 240-300m(787-985ft)ofribbon	Dependingon ribbonthick
RibbonRollCoreDia-meter(inner)	25.4mm(1.00inches)	
PrintDirections	4	
Modes of Operation		
Tear-Off(Straight-through)	Yes	
Cut-Off	Optional	Withcutter
Peel-Off(Self-strip)	Optional	Withliner takeupunit
Firmware		
OperatingSystem	IntermecFingerprintv8.20	Incl.Direct Protocol
SmoothFonts	TrueDocandTrueTypefonts	
Built-inscaleablefonts	15	Unicodefont[2]
Built-inbarcodesymbolo-	53	
StartupProgram(std)	IntermecShellv8.1	

Physical Measures		
Dimensions(WxLxH)	244x405x178mm(9.61x15.93x 7.00inches) 253x447x178mm(9.96x17.60x 7.00inches) 244x475x225mm(9.61x18.70x 8.86inches	Withlongside door Withpaper cutter With8-in.
Weight(excludingmed	7to8kg(15.5to17.7pounds)	
AmbientOperatingTem-	+5° Cto+40° C(+41° Fto+104° F)	
Humidity	20to80%non-condensing	
Electronics		
Microprocessor	32bitRISC	
On-boardFlashSIMMs	2socketsfor4MBor8MBeach	Std.1x4MB
On-boardSDRAMSIMM	1socketfor8MBor16MB	Std.8MB
Power Supply		
ACVoltage	90to265VAC,45to65Hz	
PFCRegulation	IEC61000-3-2	
PowerConsumption	Standby15W;Peak300W	
Sensors		
LabelGap/BlackMark/ OutofMedia	Yes	5 fixedposition
PrintheadLifted	Yes	
RibbonEnd/RibbonLow	Yes	
Controls		
ControlLamps	3	
Display	2x16characterLCD	Background light
Keyboard	22keysmembrane-switchtype	
Printbutton	1	
Beeper	Yes	
Data Interfaces		
Serial	1xRS-232+1xUSB	
BarCodeWand	Yes	

Appendix A—Technical Data

dCyrillicfontsaccordingtoUnicodestandardareincluded.

3

ConnectionforOptional	1EasyLAN+1othertypes	
MemoryCardAdapter	1	CompactFlas
Accessories and Options		
SpecialPrintheads	8dots/mm(203.2dpi):1type 11.81dots/mm(300dpi):2types	SeeChapter9
IntegratedPeel-stripUnit	Option	Forpeel-offoperation
RotatingMediaSupplyHub	Option	Replacesupply
3-inchAdapter	Option	
CutterandTray	Option	
LongSideDoor	Option[3]	
LongSideDoorwith8-in.	Option[3]	
LabelTakenSensor	Option	
RealTimeClock	Option	10+yearslif
RS-232Cable	Option	
ParallelInterfaceCa	Option	
ParallelInterfaceBo	Option	IEEE1284
DoubleSerialInterface	Option	
Serial/IndustrialInterface	Option	
EasyLANEthernetInter-	Option	
EasyLANWirelessInter-	Option	
ExternalAlphanumeric	Option	
CompactFlashCards	Option	8MB-1GB
CompactFlashCardPro-	Option	

B Media Specifications

This appendix specifies the physical measures for various types of media.

Media Roll Size

Core

Diameters:

Width:

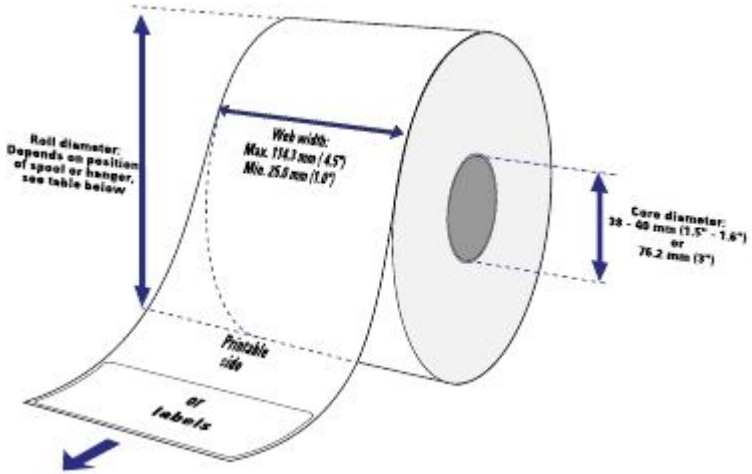
Themediamustbewoundupontheincoreinsuchaway thattheprintercanpulltheendfree.

Roll

Max.diameter:
- Position1152mm
- Position3213mm

Max.width:114.3mm
Min.width(standard):25mm
Min.width(Quick-Load):40mm

Themaximumrecommendedmediathicknessis175μm(7mils)with thestandardprintheador220μm(8.7mils)withaspecialprinthead. Thickermediamaybeused,butprintqualitywillbereduced.The stiffnessisalsoimportantandmustbebalancedagainstthicknessto maintainprintquality.


Roll diameter:
Depends on position
of spool or hanger,
see table below
Web width:
Max. 114.3 mm (4.5")
Min. 25.0 mm (1.0")
Core diameter:
38 - 40 mm (1.5" - 1.6")
or
76.2 mm (3")
Printable
side
of
labels

Caution

Mediarollstobeloadedinsidetheprintershouldbewoundwiththe printablesidefacingoutwards.

Themediasupplymustnotbeexposedtodust,sand,grit,etc.Anyhard particles,howeversmall,candamagetheprinthead.

Media

Non-Adhesive Strip

⇐ α ⇒ Μεδια Ωιδτη

Maximum:
Minimum(standard):
Min.(narrowQuick-Load):
Min.(wideQuick-Load):

Media Type Setup

- Fixlengthstrip
- Varlengthstrip

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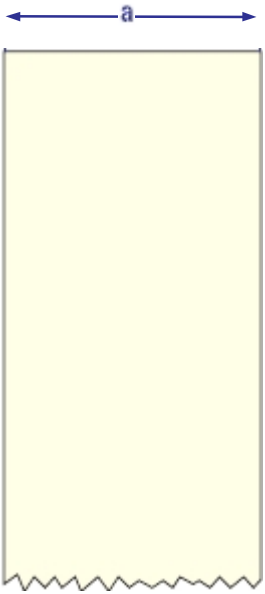


Self-Adhesive Strip

⇐ α ⇒ Μεδια Ωιδτη (ινχλυδινγ λινερ)

Maximum:
Minimum(standard):
Min.(narrowQuick-Load):
Min.(wideQuick-Load):

⇐ β ⇒ Λινερ

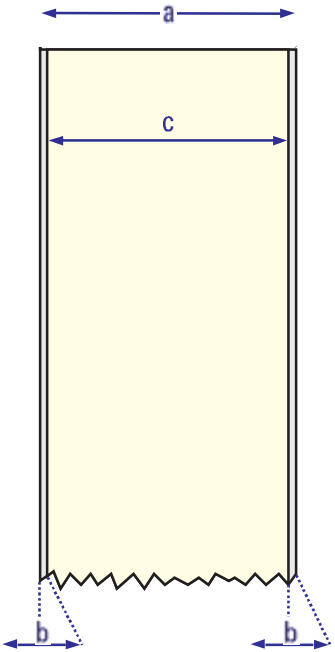
Thelinermustnotextendmorethanatotalof1.6mm(0.06inches)
outsidethefacematerialandshouldprotrudeequallyonbothsides.

⇐ χ ⇒ Μεδια Ωιδτη (εξχλυδινγ λινερ)

Maximum:
Minimum:

Media Type Setup

- Fixlengthstrip
- Varlengthstrip


a
c
b
b

Self-Adhesive Labels

⇐ α ⇒ Μεδια Ωιδτη (ινχλυδινγ λινερ)

Maximum:
Minimum(standard):
Min.(narrowQuick-Load):
Min.(wideQuick-Load):

⇐ β ⇒ Λινερ

Thebackingpapermustnotextendmorethanatotalof1.6mm(0.06 inches)outsidethelabelsandshouldprotrudeequallyonbothside.Recommendedminimumtransparency:40%(DIN53147).

⇐ χ ⇒ Λαβελ Ωιδτη (εξχλυδινγ λινερ)

Maximum:
Minimum:

⇐ δ ⇒ Λαβελ Λενγτη

Maximum:
Minimum:

Underidealcircumstances,aminimumlabellengthof4mm(0.16 inches)couldbeused.Itrequiresthesumofthelabellength(d)andthe labelgap(e)tobelargerthan7mm(0.28inches),thatbatchprintingis used,andthatnopullbackofthemediaisperformed.Intermecdoesnot guaranteethatsuchshortlabelswillwork,butitisuptotheusertotest thisinhisuniqueapplication.

⇐ ε ⇒ Λαβελ Γαπ

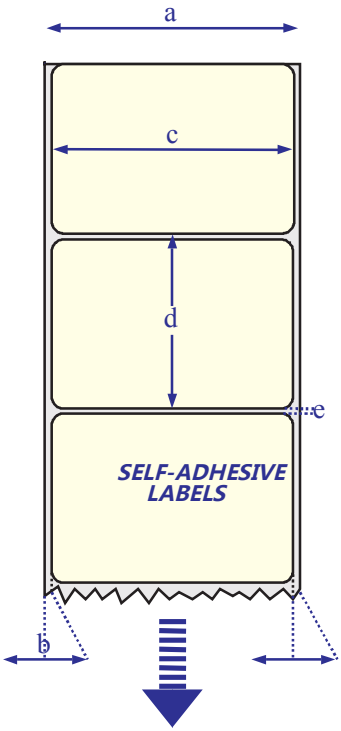
Maximum:21.3mm(0.83inches)
Recommended:3.0mm(0.12inches)
Minimum:1.2mm(0.05inches)

TheLabelStopSensormustbeabletodetecttheextremefrontedgesof thelabels.Itcanbemovedbetween5fixedpositions(seeChapter12).

Media Type Setup

- Label(wgaps)

Intermec EasyCoder PF4i Compact Industrial—User’s Guide (Fingerprint)


a
c
d
e
SELF-ADHESIVE
LABELS
b

Tickets with Gaps

⇐ α ⇒ Μεδια Ωιδτη

Maximum:
Minimum(standard):
Min.(narrowQuick-Load):
Min.(wideQuick-Load):

⇐ β ⇒ Χοπψ Λενγτη

Max.lengthbetweenslots:
Min.lengthbetweenslots:

Underidealcircumstances,aminimumticketlengthof4mm(0.16 inches)couldbeused.Itrequiresthesumofthecopylength(b)and thedetectionslitheight(e)tobelargerthan7mm(0.28inches),that batchprintingisused,andthatnopullbackofthemediaisperformed. Intermecdoesnotguaranteethatsuchshortticketswillwork,butitisup totheusertotestthisinhisuniqueapplication.

⇐ χ ⇒ ΛΣΣ Δετεχτιον Ποσιτιον

Fivefixedpositions,seeChapter12.

⇐ δ ⇒ Δετεχτιον Σλιτ Λενγτη

Thelengthofthedetectionslit(excludingcornerradii)mustbemini-mum2.5mm(0.10inches)oneithersideoftheLSSdetectionposition (e).

⇐ ε ⇒ Δετεχτιον Σλιτ Ηειγητ

Maximum:
Recommended:
Minimum:

Media Type Setup

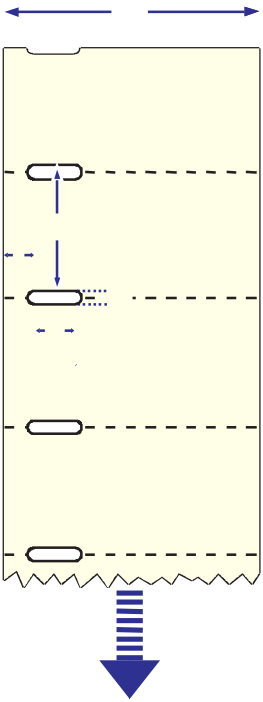
- Ticket(wgaps)

> **Note:** Donotallowanyperforationtobreaktheedgeofthe mediaasthismaycausethemediatosplitandjamtheprinter.

Intermec EasyCoder PF4i Compact Industrial—User’s Guide (Fingerprint)

a

c



Tickets with Black Mark

⇐ α ⇒ Μεδια Ωιδτη

Maximum:
Minimum(standard):
Min.(narrowQuick-Load):
Min.(wideQuick-Load):

⇐ β ⇒ Χοπψ Λενγτη

Minimum:
Maximum:

⇐ χ ⇒ ΛΣΣ Δετεχτιον Ποσιτιον

Fivefixedpositions,seeChapter12.

⇐ δ ⇒ Βλαχκ Μαρκ Ωιδτη

Thedetectablewidthoftheblackmarkshouldbeatleast5.0mm(0.2 inches)oneithersideoftheLSSdetectionpoint.

⇐ ε ⇒ Βλαχκ Μαρκ Λενγτη

Maximum:
Common:
Minimum:

⇐ φ ⇒ Βλαχκ Μαρκ Ψ–Ποσιτιον

Itisrecommendedthatyouplacetheblackmarkasclosetothefront edgeoftheticketaspossibleanduseanegativeStopAdjustvalueto controlthemediafeed,sotheticketscanbeproperlytornoff.

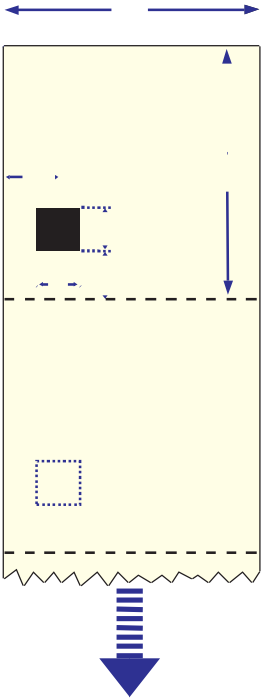
Media Type Setup

- Ticket(wmark)

> **Note:** Preprintthatmayinterferewiththedetectionof theblackmarkshouldbeavoided.However,theIntermec FingerprintstatementLBLCONDallowsthesensortobe temporarilydisabledduringaspecifiedamountofmediafeed inordertoavoidunintentionaldetection,seeIntermecFinger-printmanuals.

> **Note:** Theblackmarkshouldbenon-reflectivecarbonblack onawhitishbackground.Donotallowanyperforationsto breaktheedgeofthemediaasthismaycausethemediatosplit andjamtheprinter.

a



C Interfaces

Thisappendixdescribestheinterfaceconnectors foundontheprinter’srearplate.Itcoversthefollowingtopics:

- RS-232interface
- USBInterface
- BarCodeWandInterface
- Optionalinterfaceboards

RS-232 Interface

Protocol

Defaultsetup:
Baudrate:
Char.length
Parity:
Stopbits:
RTS/CTS
ENQ/ACK:
XON/XOFF:
NewLine:

TochangetheRS-232interfacesettings,seeChapter6, “SettingUpthe Printer.”

Signalsonprinter’ sserialport"uart1:"

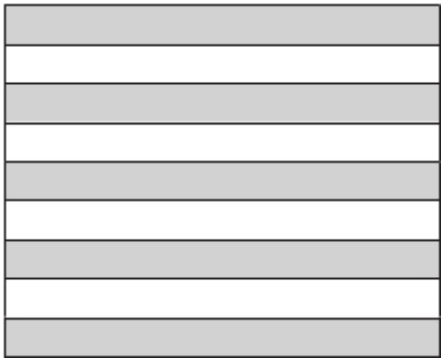
DB-9
1
2
3
4
5
6
7
8
9

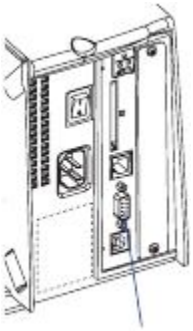
*

offatoverload.

Interface Cable

Computerend:Dependsoncomputermodel
Printerend:DB-9pinplug





/.Theexternal+5Vislimitedto500mAandisautomaticallyswitched

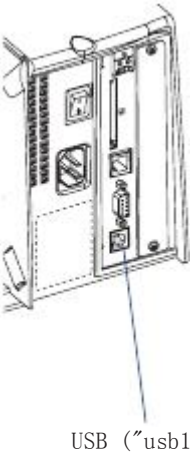
USB Interface

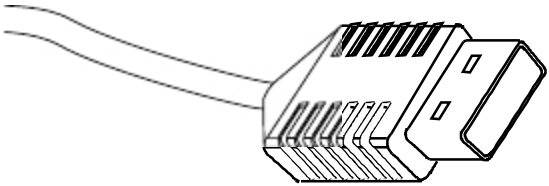
ThisprintersupportsUSBv1.1(alsocalledUSB2.0fullspeed).Touse theUSBinterfaceforprintingfromaPC,youneedaspecialIntermec USBprinterdriverinstalledinyourPC.

Theprinterisasocalled“self-powereddevice.”Werecommendthatyou onlyconnectoneprintertoeachUSBportonthehost,eitherdirectlyor viaahub.Otherdevices,likeakeyboardandamouse,canbeconnected tothesamehub.IfyouneedtoconnectmorethanoneIntermecUSB printertoahost,youshouldusedifferentUSBports.

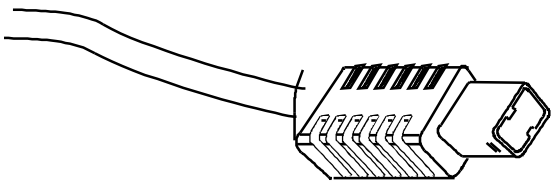
UsingaUSBClassA/Bcable,connecttheClassAplugtoyourPCor hubandtheClassBplugtoyourprinter.

TheUSBinterfaceisessentiallyaone-waycommunicationinterfaceand isthusnotrecommendedforprogramming.Thereisnocommunication setupfortheUSBport.





USB Class A connector.
Connect to PC or hub.



USB Class B connector.
Connect to USB receptacle on the printer’s rear plate.

Bar Code Wand Interface

The printer has a socket on the CPU board for connecting a bar code wand or scanner. The socket is accessible through a slot in the printer's rear plate.

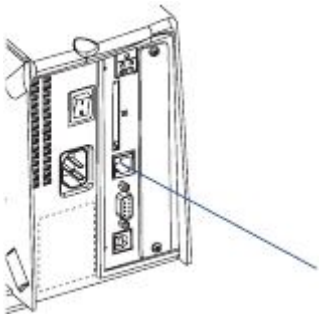
If a Code 128 bar code that contains the character FNC3 is read via this port, the data will be treated as a setup string and will change the printer's setup accordingly. A setup bar code may contain a single parameter or a combination of up to 3 or 4 setup parameters. Refer to the *EasySet BarCode Wand Setup* manual for more information on how to produce setup bar codes.

The printer will acknowledge that a bar code has been successfully read by emitting a short beep signal.

If no FNC3 character is found in the bar code, the data will be stored in a buffer which could be read by specifying the "wand:" device. The buffer is small, so it is recommended to use short bar code data (max. 16 characters) and read the buffer regularly to avoid overflow.

For more demanding applications or for reading bar codes other than Code 128, choose a regular bar code scanner from Intermec's wide product range and connect it to a serial port.

Bar code wand interface ("wand:")



Optional Interfaces

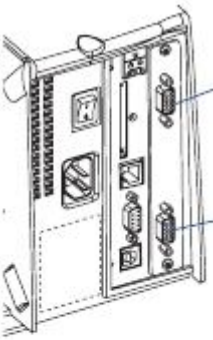
Theprintercanoptionallybefittedwithoneofthefollowinginterface boardsattheright-handsideoftheprinter' srearplate:

- DoubleSerialInterfaceBoard(device"uart2:"and"uart3:")
- Serial/IndustrialInterfaceBoard(device"uart2:")
- IEEE1284ParallelInterfaceBoard(device"centronics:")

Regardlessofanyoftheinterfaceboardmentionedaboveisinstalled,the printercanalsobefittedwithoneofthefollowingEasyLANinterface boardsforconnectiontoaLocalAreaNetwork(LAN):

- EasyLANEthernetInterface(device"net1:")
- EasyLANWirelessInterface(device"net1:")

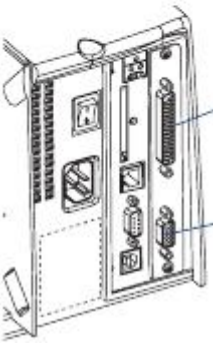
Double Serial Interface Board



"uart3:"
RS-232,
RS-422 non isolated,
or 20 mA current loop

"uart2:"
RS-232,
RS-422 non isolated,
RS-422 Isolated,
or RS-485

Serial/Industrial Interface Board



Industrial interface
8 digital In ports
8 digital Out ports
4 relay ports

"uart2:"
RS-232,
RS-422 non isolated,
RS-422 Isolated,
or RS-485

IEEE 1284 Parallel Interface Board

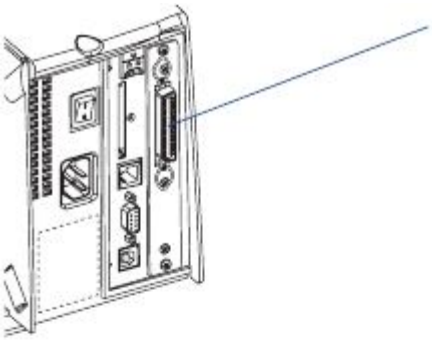
"centronics:"

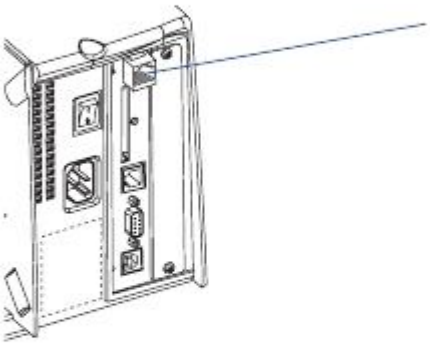
EasyLAN Ethernet Interface

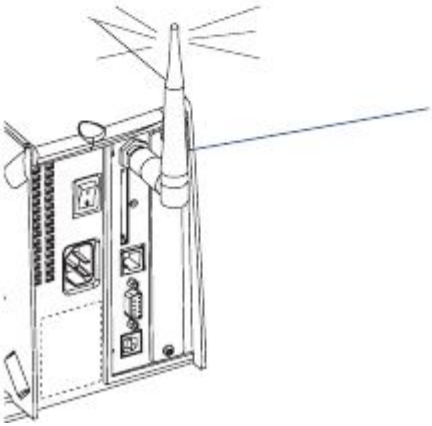
"net1:"

EasyLAN Wireless Interface

"net1:"







D Intermec Supplies

Thisappendixdescribesthesuppliesofferedby Intermecforusewiththisprinter,thatis,directther-malmedia,thermaltransferribbons,andreceiving facematerialsforthermaltransferprinting

Direct Thermal Media

Intermecofferstwoqualitygradesof**directthermal**mediafortheEasy-Coderprinters:

Premium Quality

Top-coatedmediawithhighdemandsonprintoutqualityandresistanceagainstmoisture,plasticisers,andvegetableoils.Examples:

Europe

ThermalTopBoard
ThermalTop
ThermalTopHighSpeed
DurathermLightningPlus
DurathermIR

Economy Quality

Nontop-coatedmediawithlessresistancetomoisture,plasticisers,andvegetableoils.Inallotherrespects,itisequaltoPremiumQuality.Examples:

Europe

ThermalEco
ThermalEcoBoard

Thermal Transfer Media

Intermecoffersstocklabelsforthermaltransferprintinginawiderange ofqualitygrades.

Uncoated Papers

Economicalhigh-volumeprinting.TobeusedwithGP/TMX1500ribbons.Examples:

Europe

TTRUncoated

Coated Papers

Variouscoat-weight,smoothness,andgloss.TobeusedwithHP/TMX 2200/TMX2500andGP/TMX1500ribbons.Examples:

Europe

TTRCoated
TTRPremium
TTRPremiumBoard
TTRHighGlossWhite

Polyethylene Plastics

Thesemediahavebetterresistancetowaterandmanycommonchemicalsthanuncoatedandcoatedpapers.Theycanbeuseoutdoorsand offergoodtearresistance.MostoftenusedwithHP/TMX2200/TMX 2500ribbons.Examples:

Europe

TTRPolyethylene
TTRGlossPolyethylene

Polyesters

Thesemediagivehighresistancetochemicals,heat,andmechanical abrasionwithHR/TMX3200ribbons.Examples:

Europe

TTRHighGlossPolyester

Transfer Ribbons

Intermecofferthreerangesofthermaltransferribbonsoptimizedfordifferentpurposes:

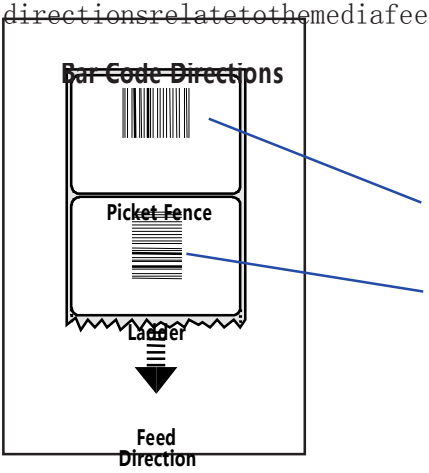
- *GeneralPurpose(GP/TMX1500)*transferribbonsallowhigh speedprintingandgiveagoodprintout,butaresomewhatsensitive tosmearing.Theymaybethebestchoiceforuncoatedandcoated papers.
- *HighPerformance(HP/TMX2200,TMX2500)*transferribbons allowhighspeedprintingandgiveahighlyreadableanddefined printoutonmostfacematerialswithsmoothsurfaces.Theyhavegood "smearresistance" andaremostsuitableforintricatelogotypesand imagesonmatte-coatedpapersandsyntheticfacematerials.
- *HighResistance(HR/TMX3200)*transferribbonsgiveanextremely durableprintout,whichisresistanttomostchemicalagentsandhigh temperatures.However,suchtransferribbonssethighdemandsonthe receivingfacematerial,whichmustbeverysmooth,suchaspolyesters.

  TheuseofHR/TMX3200ribbonsrequirestheprintspeedandthe energysuppliedbytheprintheadtobecontrolledwithgreataccuracy accordingtothereceivingfacematerial.Custom-madesetupoptions adaptedforspecialapplicationscanalsobecreated.Consultyour Intermecdistributor.

  Note:Intermecthermaltransferribbonsareengineeredspecifically fortheEasyCoderprintheads.

Bar Code Directions

Inthetablesonthepagesthatfollow,differentmaximumprintspeeds mayberecommendeddependingonthedirectionofpossiblebarcodes intheprintout.Generally,ladderstylebarcodesaremoredemanding andmayrequirealowerprintspeed,especiallyinconnectionwitha largemediarolland/ornegativestartadjustvalues(see “PrintSpeed” in
Chapter6).Theillustrationbelowshowshowthetwotypeofbarcode directionsrelatetothemediafeeddirection.



Recommended Paper Type Settings (Europe)

Direct Thermal Printing; 8 dots/mm (203.2 dpi)

Type/Speed

TopCoated/
Standard
NonTopCoated/ThermalEco
StandardThermalEcoBoard[4]
TopCoated/HighThermalTopHighSpeed

Thermal Transfer Printing; 8 dots/mm (203.2 dpi)

Type/Speed

GP02

HP66

TTRPremiumBoard[4]
TTRHighGlossWhite95
TTRPolyethylene75
TTRGlossPolyethylene90

HP07

TTRPremiumBoard[4]
TTRPolyethylene85
TTRGlossPolyethylene95

HP05

TTRPremiumBoard[4]
TTRHighGlossWhite80
TTRPolyethylene75
TTRGlossPolyethylene80

HR03

1

turely.Iftheambienttemperatureislowerthan+15° C(+59° F),decreaseprintspeedby 50mm/sec.

2

3

codes.

4

142

Direct Thermal Printing; 11.81 dots/mm (300 dpi)

Type/Speed	
TopCoated/ Standard	
NonTopCoated/ThermalEco	
StandardThermalEcoBoard[4]	
TopCoated/HighThermalTopHighSpeed	

Thermal Transfer Printing; 11.81 dots/mm (300 dpi)

Type/Speed	
GP02	
HP66	
	TTRPremiumBoard[4]
	TTRHighGlossWhite95
	TTRPolyethylene90
HP07	
	TTRPremiumBoard[4]
	TTRPolyethylene100
	TTRGlossPolyethylene100
HP05	
	TTRPremiumBoard[4]
	TTRHighGlossWhite80
	TTRPolyethylene85
	TTRGlossPolyethylene80
HR03	

1

turely. Iftheambienttemperatureislowerthan+15° C(+59° F),decreaseprintspeedby 50mm/sec.

2

3

4

Intermec EasyCoder PF4i Compact Industrial—User’s Guide (Fingerprint)

Recommended Paper Type Settings (North America)

Direct Thermal Printing; 8 dots/mm (203.2 dpi)

Type/Speed
TopCoated/ Standard
TopCoated/ High

Thermal Transfer Printing; 8 dots/mm (203.2 dpi)

Type/Speed
TMX1500
TMX2200
TMX2500
TMX3200

1

turely. If the ambient temperature is lower than +15° C (+59° F), decrease print speed by 50 mm/sec.

2

3

Direct Thermal Printing; 11.81 dots/mm (300 dpi)

Type/Speed
TopCoated/ Standard
TopCoated/ High

Thermal Transfer Printing; 11.81 dots/mm (300 dpi)

Type/Speed
TMX1500
TMX2200
TMX2500
TMX3200

1

turely. Iftheambienttemperatureislowerthan+15° C(+59° F),decreaseprintspeedby 50mm/sec.

2

3

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fax +425.355.9551
www.intermec.com

EasyCoder PF4i Compact Industrial—User's Guide (Fingerprint Version)

1-960581-02

1-960581-02